





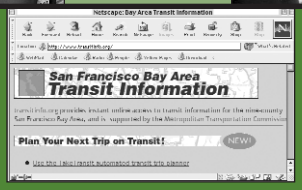

PROJECT PERFORMANCE REPORT — 2002

System Management Projects

In the San Francisco Bay Area

December 2002

Published by the
Metropolitan
Transportation
Commission

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EXECUTIVE SUMMARY

Over the years, the Bay Area has made a huge investment in its transportation infrastructure. To realize the full benefit of this expenditure, we must make a similar effort to ensure that the component parts of the network function in a well-coordinated fashion.

To this end, the Metropolitan Transportation Commission (MTC) — along with partner transportation agencies — has launched a number of projects that aim to strengthen management of the transportation system. These projects are designed to better manage traffic, improve transit and roadway operations, ensure rapid response to freeway incidents and provide on-demand traveler information — in short, they are designed to boost the efficiency and maximize the capacity of the region's transportation network while building on the strengths of the region's transportation agencies.

The projects reviewed in this *Project Performance Report* include the

- Roadside motorist-aid call box program;
- Freeway Service Patrol roving tow truck program;
- Regional Rideshare Program;
- Regional Transit Information System;
- TravInfo® traveler information phone line and Web site;
- TransLink® universal transit ticket;
- Pavement Management Technical Assistance Program; and
- Traffic Engineering Technical Assistance Program.

This *Project Performance Report* — the first in what will be an annual series — documents the status and performance of these projects over a three-year period. Where possible, data from previous years are included.

The report describes project objectives, target customers, current methods of measuring performance, project performance in FY 2001–02, and expectations of future performance for each project.

The analysis for this report finds that standardized implementation of services across the region can help ensure that travelers enjoy dependable, seamless services from the beginning to the end of their trip, no matter which city or county they may travel in or through.

This regional approach to project development and management also increases efficiency. Regional procurements and centralized project management provide the best possible leverage with contractors and reduce unnecessary duplication of effort. Furthermore, many of the projects reviewed in this report use innovative approaches to contracting for services that can serve as models for other programs. The TravInfo®, TransLink® and call box projects, for example, are structured so that the contractor shares both the burdens and the rewards of successful project implementation.

Some of the project highlights for 2002 include:

- Expansion of the Freeway Service Patrol's area of coverage;
- Development of a five-year strategic plan for the call box program;
- Surge in usage of the transit trip planner in its first year of operation: more than 1 million requests for transit itineraries were received and fulfilled;
- Launch of TravInfo®'s 511 phone line and 511.org; and
- Success of the TransLink® pilot program.

The accomplishments of these regional projects over the past year are an indication of the usefulness of such partnership programs and their potential for providing efficient, convenient services for the traveling public.

INTRODUCTION

Managing traffic, improving transit and roadway operations, ensuring rapid response to freeway incidents and providing on-demand traveler information — these are some of the components of a successful system management strategy. The ultimate goal of system management is to ensure the optimal operation of the transportation network. It is only by coordinating network components in the most coherent and efficient way possible that the region's transportation service providers can serve the myriad mobility needs of Bay Area residents. The Bay Area's regional system management program is structured to meet two specific goals:

- Develop, implement and maintain services that provide and enhance transportation options to users of the region's transportation system.
- Provide technical assistance to partner agencies to improve the operation of the transportation network in the region.

The Bay Area is making progress toward these goals on a project-by-project basis. Together, these system management projects help squeeze more capacity out of existing resources and improve the travel experience of transportation system users. In the process of implementing such projects, we have identified and capitalized on three factors that are crucial in the development and effective management of a Bay Area transportation system. These factors are partnership, technology and a focus on the customer.

Partnership

The Bay Area's transportation system is built, operated and maintained by several independent agencies and jurisdictions. This traditional division of responsibility makes it more difficult for the system to function as a regional network that is convenient to use and to manage efficiently. Making a virtue out of necessity, we are achieving new levels of cooperation among multiple transportation agencies to ensure that separate jurisdictional responsibilities do not interfere with the smooth operation of the region's transit services, arterials and freeway system. While MTC acts on behalf of these partnerships to design and deliver the regional customer service projects described in this report, these projects are built on the strong foundation provided by transit agencies, Caltrans, the California Highway Patrol and local public works agencies.

Technology

Technology is changing transportation and is a powerful tool for system management. The smart card technology powering the TransLink® universal transit fare card and the voice recognition technology behind 511 will pay big dividends in user convenience and system efficiency. Advances in communications technologies have made it possible to collect and disseminate a vast volume of information on the state of the transportation system. By telephone and over the Internet or using communication technology for freeway incident management, this information is being put to use in a variety of ways — by transportation agencies and by individual travelers — to improve the operations of the system.

Customer Focus

The users of the transportation system are customers — millions of individual customers — and they must be treated as such. Today's travelers are savvy consumers of transportation services, and as consumers they want and expect convenience as well as a range of travel options to choose from. As good system managers, we must strive to provide them with information and with handy, easy-to-use services, because the better their individual travel decisions, the more efficiently the transportation system will perform overall.

The examples of system management in the pages that follow all to one degree or another display these features: partnerships, technology and customer-focused services. These are the tools the region is using to develop a more effective transportation system for the 21st century.

Successful Combination

Although managing the implementation of new technologies, partnering on operational projects or developing customer-focused products have not traditionally been tasks that metropolitan planning organizations like MTC have undertaken in partnership with others, our region has repeatedly been recognized as a leader in this field. Some examples of this recognition include the following:

- In its *2001 Report to the American People*, the Federal Highway Administration (FHWA) commended MTC for an excellent response to "the need for stronger links between transportation planning and operations."

- At the November 2001 launch of the TransLink® universal transit fare card, Federal Transit Administration (FTA) chief, Jennifer Dorn, described the project as visionary, one that demonstrates caring for its customers, and something she hoped would be replicated in other regions.
- The TakeTransit℠ trip planner was recognized for excellence by the California Transportation Foundation through its 2002 Tranny award.
- The FHWA and the FTA named one of the Bay Area's regional projects — the Freeway Service Patrol roving tow truck program — as an "exemplary" Congestion Mitigation and Air Quality Improvement Program (CMAQ)-funded project in 1996.

Performance Report

The *Project Performance Report* for FY 2001–02 presents a detailed and comprehensive appraisal of the regional system management program to the Commission and the Bay Area Partnership. MTC intends to use this annual review of project effectiveness as part of an ongoing process to evaluate system management projects.

The *2001 Regional Transportation Plan* (RTP) for the San Francisco Bay Area reaffirmed the commitment to system management that MTC has espoused since the early 1990s. While the Bay Area continues to make significant strategic investments to expand the transportation system, MTC is increasingly choosing to design and implement improvements that focus on boosting the efficiency of the region's existing transportation network and giving users better information and travel options to make the most of the region's roadway and transit network. The wisdom of this system management approach was endorsed by the more than 4,000 people who took part in the public review of the RTP. One of the key messages to emerge from that public participation process was "Let's get more out of our existing transportation resources." The specific response in the RTP was to set aside over a half billion dollars in new discretionary funding to sustain system management and customer service programs.

MTC allocates monies from the region's apportionment of two federal programs made available under the Transportation Equity Act for the 21st Century (TEA 21) — CMAQ and the Surface Transportation Program (STP) — to fund the regional system management program. Because these monies are taken by Commission action before distribution of funds to partner agencies, both the Commission and its partners have a keen interest in ensuring that the projects' objectives are met and that the regional program is managed as efficiently as possible.

In response to a request from Bay Area partners in 1998, MTC staff began producing an annual report on measures of effectiveness. For the past two years, this report was provided through a memorandum to the Partnership's Planning and Operations Committee members. This year's *Project Performance Report* builds on the previous years' memoranda and presents a more detailed and comprehensive appraisal. This report is intended to better respond to Partnership questions about specific projects, as well as to serve as a useful tool for the Commission to monitor, direct and, if necessary based on performance, modify the regional system management program. Presentation of this data will be further refined as monitoring and evaluation procedures are strengthened.

Looking Ahead

This is the first of what we intend to be an annual document. As it evolves, we expect the information it provides to become more and more useful to its readers. As additional market research is completed, those findings will be incorporated in future reports. Experience with and data from tracking new performance measures also will be reported.

We welcome feedback about the content of this report, including comments about data that readers of the report find particularly helpful, and suggestions for information that they would like to see added to or deleted from the document.

REGIONAL PROJECT MANAGEMENT APPROACH

Regional Project Management Approach

MTC is committed to achieving system management objectives in a cost-effective manner. Since we deliver most operational projects through contracts, MTC has implemented or is developing strategies — tools, policies and practices — to ensure that the contractors' performance meets or exceeds expectations, and that changes in program direction or increased contractor oversight will be made if the contractors' performance falls short. MTC has successfully applied several key strategies to ensure that they are effectively administered and managed. While summarized here, these strategies are more fully illustrated in the project descriptions that follow.

Regional Procurement

A regional approach to project development and management increases efficiency and best serves travelers whose trips cross jurisdictional boundaries. Centralized project management provides the best possible leverage with contractors and reduces unnecessary duplication of effort. Imagine if each county were to implement a separate freeway service patrol, or if each transit agency were to introduce a smart card fare collection program independently. The region is benefiting from economies of scale, as well as providing the highest level of service to travelers by ensuring consistent delivery throughout the region.

Innovative Contracting Strategies

Many of the projects reviewed in this report use innovative approaches to contracting for services that can serve as models for other programs. The TravInfo®, TransLink® and call box contracts, for example, are structured so that the contractor shares both the burdens and the rewards of successful project implementation. The contracts incorporate financial incentives to ensure that services are delivered to meet functional specifications, satisfy the customer, and generate usage.

The TransLink® and TravInfo® programs are also design-build-operate-and-maintain (DBOM) contracts. This innovative contracting strategy builds a productive alliance with expert contractors, providing incentives for the contractor to be as dedicated to project success and customer satisfaction as project sponsors are. Because contractors are involved with the ongoing service operation and maintenance, a DBOM approach helps ensure that projects are not only designed and built well, but also are cost-effective to operate and maintain. In addition, because one project team is selected to deliver the project, the team lead can more easily be held accountable for delivering it than when many contractors and subcontractors are involved. Finally, because project staff work side by side with contractors over many phases of a DBOM project, this approach to contracting also builds considerable project knowledge.

Oversight

While responsibility for daily project and contract management rests with MTC staff, each project receives direction from an advisory or oversight committee typically comprised of staff from partner agencies. MTC staff convenes regular meetings to exchange information about project status, provide detailed reports on project developments and performance, and obtain input and feedback from committee members. Though the level of input varies, policies and procedures are developed with significant input from these committees. The delivery of projects such as TransLink® and TravInfo® would not be possible without the participation, cooperation and coordination of partner agency staff. Managing these committees is an important responsibility for MTC's project managers. A description of advisory/oversight committee membership for system management projects is provided in Appendix A.

Project Monitoring

MTC staff regularly report performance statistics on the system management program to the Commission. MTC recently retained a market research firm to improve this performance reporting by refining the target markets, strengthening project-specific mechanisms for gathering consumer input, and ensuring research consistency across all the projects. MTC expects to rely increasingly on consumer feedback to determine future direction of the system management program.

Rigorous Project Management

MTC uses all of the above strategies to determine when we should consider changing program direction to respond to new opportunities and emerging public needs. For example, due to decreasing call volumes in the call box program, MTC developed a strategic review of the program and recommended reducing the number of call boxes, while main-

taining accessibility for people with disabilities at the remaining call boxes. Another example of active project management is the Regional Rideshare Program performance audit. In response to concerns voiced by the Regional Rideshare Program oversight group, MTC initiated a comprehensive performance audit. The audit is now complete and MTC is beginning to implement its recommendations on strategic planning, program roles and responsibilities, and performance reporting procedures.

Taken together, these project management strategies help ensure that the region's resources are used as efficiently as possible in the delivery of system management projects.

PROJECT PERFORMANCE REPORT

SYSTEM MANAGEMENT FUNDING

System Management Funding

In the 2001 RTP, the Commission reaffirmed its policy to fund system management projects with dedicated STP and CMAQ funds. Commitment of these funds demonstrates the Commission's belief that regional delivery of system management projects is a cost-effective way to increase productivity of the transportation system and that a consistent and long-term approach to funding these projects should be implemented. Complex, multiyear projects must be assured steady funding to be successful.

Funding for MTC-sponsored regional projects accounts for a relatively small — but significant — percentage of the Bay Area's total STP and CMAQ revenues each year. Over the 25-year planning horizon, the 2001 RTP assumes $2.4 billion in STP and CMAQ revenues for the region. As shown in Figure 1, 18.4 percent of these funds ($436.5 million) would be spent on the system management program presented in this report. (For the purpose of this funding discussion and the entire Project Performance Report, all numbers are presented in 2001 dollars.)

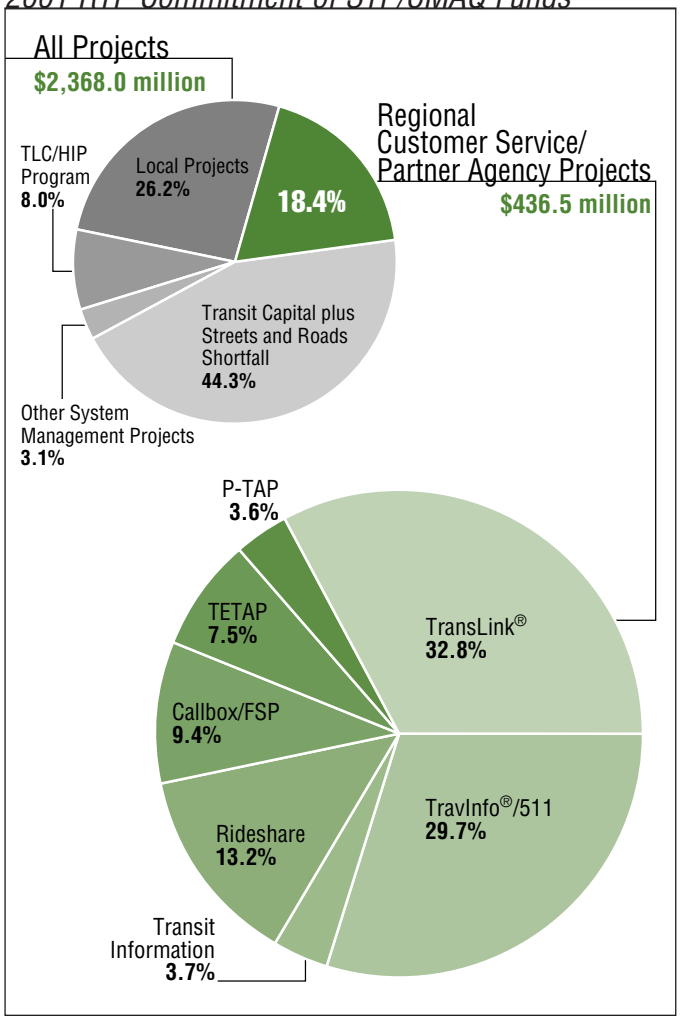
Figure 2 (next page) displays the total and annual revenue needs for the regional system management projects. STP/CMAQ funding amounts in FY 01/02 and FY 02/03 represent actual programmed funds while amounts in FY 03/04 to FY 05/06 represent 2001 RTP commitments. It is important to note that revenue information does not necessarily represent project costs in any given year.

Over the five-year period from FY 01/02 to FY 05/06, 55 percent of project revenues are from state and local sources rather than from the STP or CMAQ programs (see Figure 3).

Details on funding for specific projects are included in the individual project analyses that follow.

figure 1

*2001 RTP Commitment of STP/CMAQ Funds**



* Regional funds defined as STP/CMAQ from FY 01/02 to FY 25/26, per the adopted 2001 RTP

figure 3

Five-Year System Management Program Revenue Snapshot

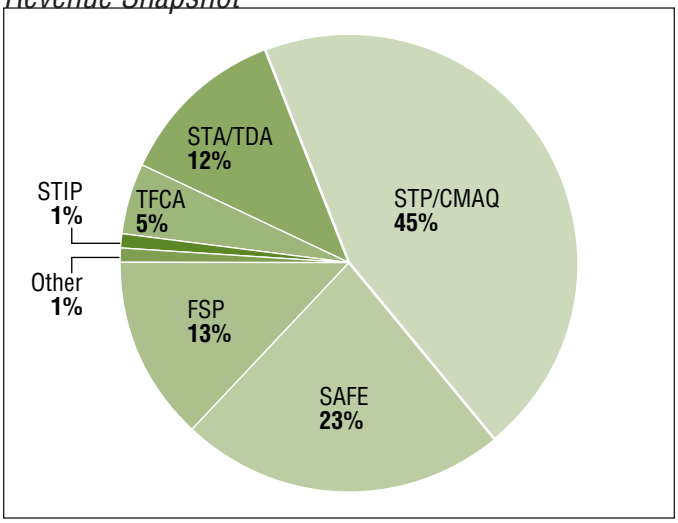


figure 2

Five-Year Project Revenue Summary*

(In thousands of 2001 dollars) Project		Funding Source	Fiscal Year 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
Customer Services	Incident Management Program (FSP/Call Box)	STP/CMAQ	$971	$303	$1,584	$1,584	$1,584	$6,025	9%	
		Other	$11,518	$11,334	$11,456	$11,722	$11,878	$57,909	91%	
		Total	$12,489	$11,637	$13,040	$13,306	$13,462	$63,934		$12,787
	Regional Rideshare Program	STP/CMAQ	—	—	$2,173	$2,171	$2,347	$6,691	36%	
		Other	$3,696	$3,677	$1,489	$1,458	$1,457	$11,777	64%	
		Total	$3,696	$3,677	$3,662	$3,629	$3,804	$18,468		$3,694
	Regional Transit Information System	STP/CMAQ	$299	$290	$621	$748	$663	$2,620	34%	
		Other	$1,633	$1,388	$621	$748	$663	$5,052	66%	
		Total	$1,932	$1,678	$1,242	$1,496	$1,326	$7,672		$1,534
	TravInfo®/511	STP/CMAQ	$7,505	$5,099	$5,489	$4,686	$4,409	$27,188	87%	
		Other	$975	$679	$848	$824	$571	$3,897	13%	
		Total	$8,480	$5,778	$6,337	$5,510	$4,980	$31,085		$6,217
	TransLink®	STP/CMAQ	$3,526	$9,739	$7,877	$1,925	$2,421	$25,488	65%	
		Other	$2,159	$1,749	$1,883	$2,974	$4,765	$13,530	35%	
		Total	$5,685	$11,488	$9,760	$4,899	$7,186	$39,018		$7,804
Partner Agency Services	Pavement Management Technical Assistance Program	STP/CMAQ	$485	$471	$641	$622	$604	$2,823	89%	
		Other	$63	$61	$83	$81	$78	$366	11%	
		Total	$548	$532	$724	$703	$682	$3,189		$638
	Traffic Engineering Technical Assistance Program	STP/CMAQ	$215	$208	$1,300	$1,262	$1,225	$4,209	89%	
		Other	$28	$27	$168	$163	$159	$545	11%	
		Total	$243	$235	$1,468	$1,425	$1,384	$4,754		$951
TOTALS	All Customer and Partner Agency Services Combined	STP/CMAQ	$13,001	$16,110	$19,685	$12,998	$13,253	$75,044	45%	
		Other	$21,072	$18,915	$16,548	$17,970	$19,571	$93,076	55%	
		Total	$33,073	$35,025	$36,233	$30,968	$32,824	$168,120		

* Consistent with the adopted 2001 RTP funding commitments.

CUSTOMER SERVICE PROJECTS UNDER DEVELOPMENT

TransLink®: Universal Fare Payment System

TransLink® is the Bay Area's universal transit fare payment system, based on smart card technology. With TransLink®, transit riders will be able to use a single card to pay their fares on buses, trains, light-rail vehicles and ferries all around the region. The TransLink® project reached a major milestone with the successful completion of the Phase I demonstration on July 31, 2002. Phase I of the project included the design and manufacture of the basic components of the TransLink® system, a six-month pilot program, and a comprehensive evaluation. Six transit operators (AC Transit, BART, Caltrain, Golden Gate, San Francisco Muni and Santa Clara County's VTA) participated in the demonstration, each on a portion of their routes or stations.

Phase II of the project includes full regional implementation and on-going operation and maintenance of the system. For both Phases I and II, MTC has contracted with Motorola, Inc., under a design-build-operate-and-maintain contract.

A decision by the transit agencies and MTC to implement Phase II is expected by early 2003. In the meantime, MTC and transit operators participating in the pilot have agreed to continue accepting TransLink® smart cards while they work out details for full regional implementation.

Project Objectives

Establish a single regional fare collection system in order to:

- Improve passenger convenience in inter- and intra-agency trips;
- Improve efficiency and security of the region's fare collection system;
- Improve transit system data collection for service planning and the development of fare policies; and
- Allow participation in revenue-enhancing or cost-saving business partnerships with the private sector.

"It is definitely going to be the fare payment of the future…I love how easy it has become to travel."

Highlights

FY 01/02 performance highlights for TransLink® include the following:

- Successful system performance in pilot program;
- Positive customer feedback from telephone survey and focus group findings; and
- Encouraging usage trends during pilot program.

Project Revenues

The following table provides TransLink® project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which include programmed State Transit Assistance funds. Significant TransLink® revenues (Section 5307, State Transportation Improvement Program and other state and local funds) were obligated prior to FY 01/02 and are not included in the funding table; these funds will be spent as the system is rolled out in the region.

TransLink®

Funding Source	Fiscal Year (In thousands of 2001 dollars) 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
STP/CMAQ	$3,526	$9,739	$7,877	$1,925	$2,421	$25,488	65%	
Other	$2,159	$1,749	$1,883	$2,974	$4,765	$13,530	35%	
Total	**$5,685**	**$11,488**	**$9,760**	**$4,899**	**$7,186**	**$39,018**		**$7,804**

Target Customer

Transit users and transit operators.

Measuring Performance

The decision to implement TransLink® regionally is contingent, in part, on its technical performance and customer acceptance during the TransLink® Pilot Program, and its long-term financial implications. MTC contracted with Charles River Associates (CRA) on behalf of the region's transit operators to provide an independent evaluation of the demonstration. The TransLink® Demonstration Evaluation Committee, which includes representatives from MTC and the transit operators, provided input and guidance to CRA on the evaluation. In addition, the TransLink® Oversight Committee, which includes the lead liaison staff from each transit agency participating in the pilot program, closely tracked perfor-

mance data throughout the demonstration period.

The major data collection components of the CRA evaluation included:

- Two surveys of the smart card users, in which more than 2,000 telephone interviews were conducted;
- A survey of Bay Area transit riders who had never used TransLink®;
- Four focus groups with TransLink® Pilot Program participants;
- Interviews with transit operator and MTC staff and management;
- Analysis of operational data collected by the TransLink® Service Bureau, data collected by the participating transit operators, and data collected by MTC; and
- An end-to-end system evaluation of how well TransLink® serves persons with disabilities.

Project Performance

During the six-month TransLink® Pilot Program more than 3,000 public cardholders used the TransLink® system, totaling a combined volume of 120,000 payment and add value transactions (see Figure 1). Both the total number of cards used (see Figure 2) and the cumulative total transactions increased steadily throughout the demonstration period.

As a result of a delay in the start date following distribution of cards to the pilot volunteers, initial usage of the cards was lower than expected. In response, MTC and the transit agencies initiated a second wave of recruitment in the first half of the demonstration. This effort was successful in boosting card circulation and transaction volumes. At the end of the demonstration period, the noncumulative average number of rides per month per card increased from 8.4 to 16.1, a 92 percent increase (see Figure 3, next page).

CRA's evaluation concluded the following:

- TransLink® users are enthusiastic about the system. This was revealed both in the quantitative telephone surveys and in the focus groups. More than 75 percent of survey respondents reported being completely satisfied or satisfied with TransLink® overall; less than 4 percent were dissatisfied. TransLink® cardholders agreed most strongly with the statements: "When TransLink® becomes

figure 2

TransLink® Pilot Program: Total Cards Used

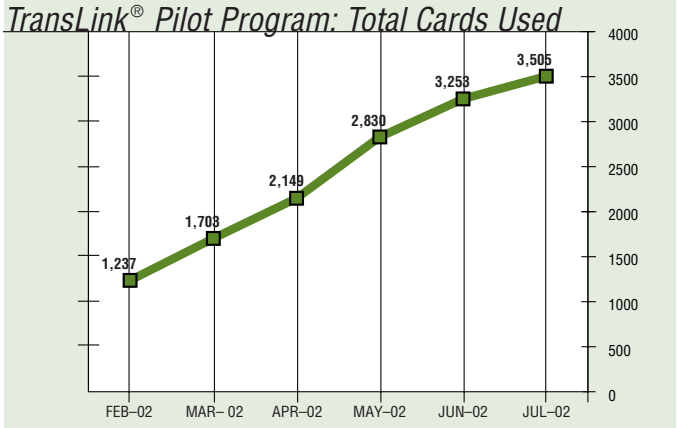


figure 1

TransLink® Pilot Program Transactions

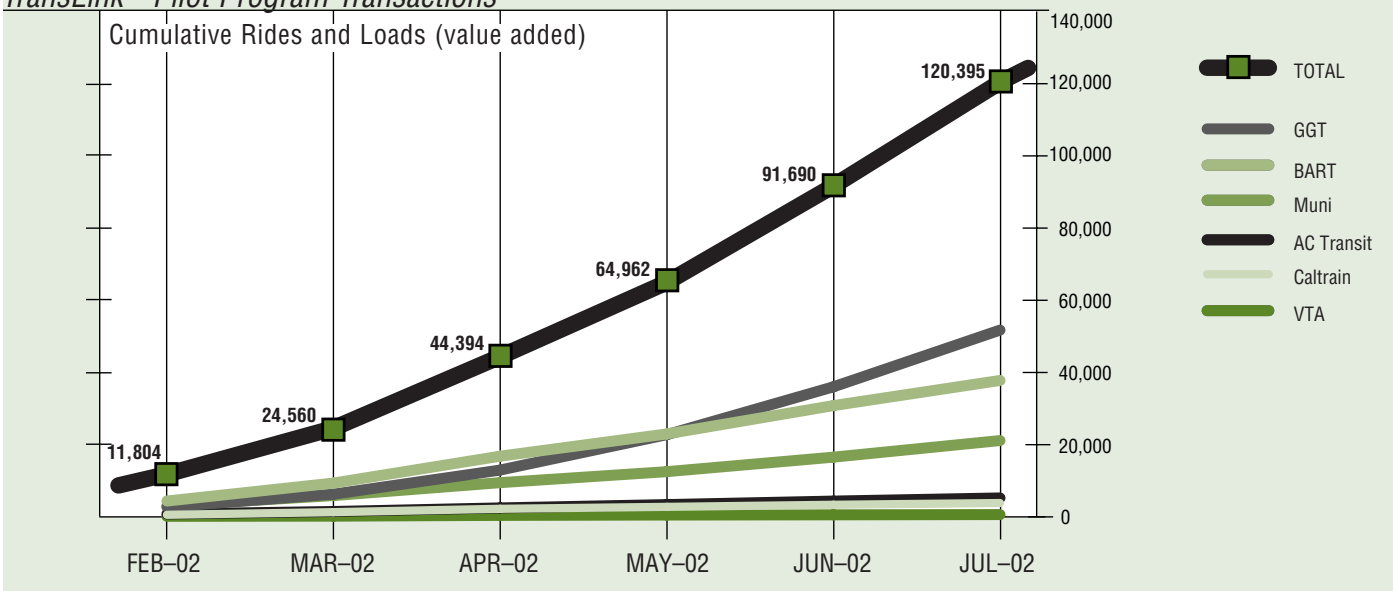
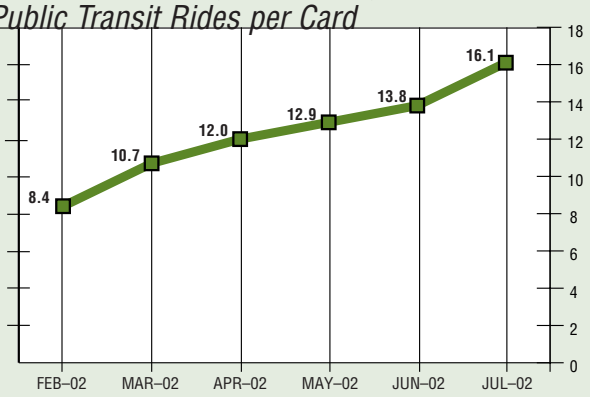


figure 3

TransLink® Pilot Program: Average Number of Public Transit Rides per Card



available to everybody, I'll certainly recommend it to my transit-riding friends" and "TransLink® is so much more convenient than any other method of paying fares." In focus groups of users, 34 of 35 participants agreed that TransLink® should be expanded region wide.

- A Bay Area transit riders survey conducted by CRA in fall 2001 to gauge transit riders' response to new fare media distribution strategies and the TransLink® concept found that, overall, 90 percent of respondents were "likely to use" the TransLink® card.
- Overall, the TransLink® technology worked well in a multiagency, multifare environment. On the whole, transit agency staff and pilot program participants were convinced that the system has significant potential benefits if implemented regionally. With the exception of the handheld card reader, reliability of all devices and the accuracy of transaction settlement through the clearinghouse exceeded the rigorous contract performance standards.
- All categories of devices subject to the accuracy requirement in the Motorola contract met the performance standard at the end of the evaluation period. The performance requirement for financial transaction accuracy states that 99.73 percent of all value recorded by the TransLink® system must be automatically settled to the appropriate party. The TransLink® system automatically tracks and reports missing transactions. During the demonstration period, MTC reviewed missing transactions (142 transactions of 147,565 total, or less than 1 percent) and successfully attributed all missing value to the appropriate transit operators.
- The transit agencies identified several institutional issues that will need attention prior to Phase II implementation, including cost-sharing and governance over operational policies.
- Golden Gate Transit posted the most transactions of any transit agency, not surprisingly, since Golden Gate Ferry services were fully equipped with TransLink® equipment. BART and Muni also showed significant numbers of transactions although TransLink® coverage of their systems was limited to a subset of specific lines and stations. AC Transit, Caltrain and VTA had relatively small transaction volumes.

Future Expectations

The current schedule calls for a decision on Phase II full implementation by early 2003. The general managers of the transit agencies have been meeting monthly since the beginning of 2002 to address financial, operational and organizational issues that need resolution prior to full regional development of the program.

MTC has established key project benchmarks for FY 02/03:

- Until Phase II operations begin, the system performance will continue to be monitored under Phase I requirements;
- Transit agencies will adopt a cost and revenue allocation agreement and operating rules to govern how the TransLink® system will be implemented in Phase II (early 2003);
- MTC and a key number of transit agencies will execute a participation agreement that will prescribe the cost and revenue allocation agreement, operating rules, and a decision-making structure to oversee ongoing implementation (March 2003);
- MTC will issue a Notice to Proceed to Motorola for Phase II; and
- First operator begins Phase II operations as part of full regional implementation (late 2003).

"Great system — and a valuable asset for us commuters."

"I wish I could use this card for all transportation throughout the Bay Area"

Regional Traveler Information Services/ TravInfo®

TravInfo® is a key component of the Bay Area's traveler information services, along with the Regional Transit Information System and the Regional Rideshare Program (described later in this report). TravInfo® collects data from various sources in the Bay Area and provides the public with accurate, comprehensive and timely information about traffic congestion, roadway incidents, construction activity and special and emergency events. In addition, TravInfo®'s phone system provides direct connections to Bay Area transit operators, ridesharing organizations and other transportation agencies. Data for the TravInfo® system comes from the California Highway Patrol (CHP), Caltrans and other Bay Area transportation agencies. TravInfo®'s 817-1717 telephone service has been operational since October 1996. TravInfo® information also is disseminated through other channels, such as traffic Web sites run by private companies, local radio stations, and (through a partnership between MTC, Caltrans and the CHP) as a supplement to traffic reports on television, with live reports from the Traffic Management Center at Caltrans District 4 headquarters.

The TravInfo® contractor, PB Farradyne, provides data collection, fusion, dissemination and marketing under a design-build-operate-and-maintain contract managed by MTC. In addition to operating the existing TravInfo® system, PB Farradyne is responsible for developing system enhancements. The most significant enhancements are to (a) design and build a travel-time data collection system using FasTrak™ toll tag readers and (b) transition the phone system from 817-1717 to 511, including the implementation of a state-of-the-art voice responsive system. Once the new service is launched, it will be known to the public as "511," and the TravInfo® name will no longer be used.

Highlights

In FY 2001–02, TravInfo®

- Continued the development of enhancements to all aspects of its traveler information services. Significant work has been done to enhance the service's data collection, data processing and data dissemination systems.
- In partnership with the CHP and Caltrans, began television broadcasts from the Caltrans Traffic Management Center. Local television stations use these broadcasts to supplement their existing traffic reports during the morning and evening commutes. In addition, through TravInfo®'s partnership with Westwood One, TravInfo® data is now being used in radio traffic reports during the morning and evening commutes.

Project Objective

- Provide comprehensive, accurate, reliable and useful multimodal travel information that meets the needs of Bay Area travelers.

Project Revenues

The table below provides TravInfo® project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which, in the case of TravInfo®, are entirely comprised of Service Authority for Freeways and Expressways (SAFE) funds.

TravInfo®

Funding Source	Fiscal Year (In thousands of 2001 dollars) 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
STP/CMAQ	$7,505	$5,099	$5,489	$4,686	$4,409	$27,188	87%	
Other	$ 975	$ 679	$ 848	$ 824	$571	$ 3,897	13%	
Total	**$8,480**	**$5,778**	**$6,337**	**$5,510**	**$4,980**	**$31,085**		**$6,217**

Target Customer

The primary target customers are users of all transportation system modes and markets; secondary customers include public transportation agencies, which can use the information to fill in gaps in the data that they get from their own systems, and private-sector data disseminators, which provide this information to travelers (e.g., TeleAtlas, a telematics company that uses TravInfo® information on its Web site).

Measuring Performance

The six-year contract with PB Farradyne is structured so that a portion of the contractor's fee is based on achieving system usage and customer satisfaction goals. The TravInfo® contractor generates a monthly report of public call volumes and private partner use of TravInfo®. An independent contractor will conduct user surveys annually to gauge customer satisfaction with the information provided through the service.

Project Performance

Usage and Data Dissemination

Although TravInfo® experienced a modest decline of 7 percent in phone and Web usage in FY 01/02, total usage was up, because of the addition of radio broadcasts using TravInfo® data. Figure 1 shows the usage for the phone number and Web site, while Figure 2 shows the total usage, including radio broadcasts by Westwood One (Metro Networks). Including all dissemination methods, TravInfo® had 1,703,297 traffic users and 366,780 transit users in FY 01/02.The traveling public made 630,385 calls to 817-1717, down 17.5 percent from FY 00/01. Call volumes for each type of information (transit, traffic, rideshare and other) declined. The decline in usage is largely explained by the decision to focus resources on building system enhancements rather than marketing the existing system, with its dated technology and telephone number.

figure 1

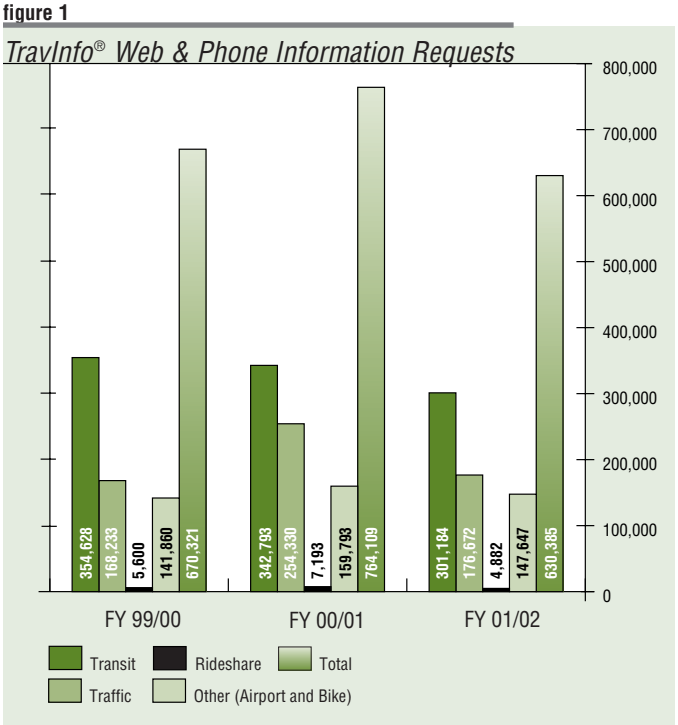
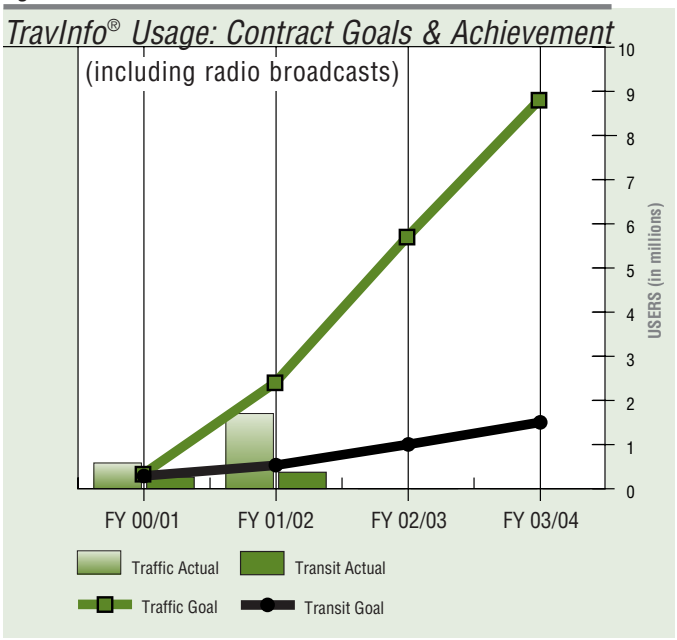


figure 2



In contrast to phone usage, Web use through TravInfo® Information Service Providers was up. Private companies that used TravInfo® traffic data as content for their Web sites recorded 463,505 user sessions in FY 01/02, up 12 percent from 415,400 in FY 00/01.

In addition, in June, TravInfo® assisted the CHP in inaugurating live broadcasts of traffic reports from the Caltrans Traffic Management Center on three local television stations during the morning commute. The traveler information number, 511, will be promoted on-screen on these stations. While these broadcasts were not included in the usage calculations, MTC expects them to become an important feature in marketing 511.

A unique element of the TravInfo® contract is connection between system usage and the consultant's fee. Under the contract, PB Farradyne is eligible for up to an 8 percent fee (above its fixed fee of 6 percent) if it meets the usage goals set out for each year. This is to ensure that the consultant has a strong incentive to maximize the overall usefulness and value of the service. MTC established ambitious goals in the contract, based on the experiences of traveler information projects around the country. Because the development of the various enhancements to the system has taken longer than expected, PB Farradyne has been slow in meeting the contract's usage goals. (Figure 2 shows the usage goals for the contract, as well as the actual usage for the first two years.)

Traffic Data Collection

The TravInfo® program seeks to integrate traffic, transit, bicycling and rideshare information to provide a single point of access for all traveler information. The original approach was to rely on existing sources of information, such as the:

- Caltrans Traffic Operations System for freeway speed and congestion information;
- CHP Computer Aided Dispatch (CAD) for freeway accident information;
- Regional Rideshare Program (RIDES) for alternative transportation information; and
- Regional Transit Information System (the Regional Transit Database and transit agency call centers) for transit information.

The contract requires PB Farradyne to meet certain data quality performance requirements, which were developed based on consumer research for traveler information. For example, data has to be available on essentially all Bay Area freeways, it must be accurate within 15 percent, and it must be updated at least every 90 seconds. In the event that the data do not meet these requirements, PB Farradyne is required to develop an alternative data collection system.

At this time, existing data collection using pavement loop detectors is not operating at the performance levels MTC established for providing reliable travel time information. As an alternative, PB Farradyne has recommended implementation of a toll tag-based system. This system provides travel time information, is commercially proven, and provides protection to individuals' privacy. The greatest risks to the deployment of this system are cost and schedule.

MTC and Caltrans have decided to install readers on the Interstate 80 corridor as a pilot deployment to determine the feasibility of a full deployment of readers throughout the freeway system. Although plans for the deployment are nearly complete, and construction is planned to begin by January 2003, the preliminary costs leading up to deployment have been significantly higher than MTC staff and contractors anticipated, primarily due to Caltrans' administrative and structural requirements for work performed on the state-owned right of way.

Incident and accident information, which is complementary to the travel time and speed information, also is very important to travelers. MTC currently has access to the CHP CAD system, and TravInfo® operators manually enter data from that system into the TravInfo® database. MTC has been working with the CHP to develop an electronic interface, which would both improve operational efficiency and reduce the chance of errors. Due to security concerns, however, the CHP has not given MTC direct electronic access to the CAD. MTC is exploring alternative approaches with the CHP.

Future Expectations

Because freeway traffic data and travel time information are essential components of the program, the success of TravInfo® depends heavily on the cost-effective implementation of the toll-tag system.

If the I-80 demonstration — scheduled to begin in early 2003 — is successfully implemented, MTC and Caltrans will need to agree on a plan for cost-effective deployment of toll-tag readers in the remainder of the region. However, if a cost-effective deployment is not possible, TravInfo® must rely on the Caltrans data system. Depending on the status and performance of this system, MTC will need to reconsider future TravInfo® contract and usage requirements for freeway travel time information.

TravInfo® has the following project-level milestones for FY 02/03:

- 511 — The public will be able to dial 511 for toll-free access to transportation information. In addition, the existing touch-tone-based system will be replaced by a customer-friendly voice-response system (December 2002).
- 511.org — MTC will launch a 511.org Web portal to serve as the Internet gateway to traveler information currently offered at transitinfo.org and rides.org. New Web sites will provide traffic and bicycling information. 511.org will be launched in three phases, as individual components of the service, such as the revamped transit information page and the new traffic information page, are ready for consumer use (winter through spring 2003).
- Marketing — The TravInfo® brand will be completely replaced by the new 511 brand for traveler information. A major marketing campaign will be initiated to launch 511/511.org. In addition, in the spring of 2003, MTC and Caltrans will replace existing rideshare signs on the freeways with signs marketing the 511 telephone number. All marketing for rideshare services and the transit information program will use 511 and 511.org.
- MTC will monitor the contractor's achievement of FY 02/03 usage goals. 511, 511.org and all other uses of TravInfo® data will be considered in assessing PB Farradyne's performance.

PROJECT PERFORMANCE REPORT

CUSTOMER SERVICE PROJECTS IN FULL OPERATION

Call Box Program

The call box program gives motorists who need roadside assistance an effective means of communication 24 hours per day, allowing them to speak directly to a dispatcher to report road hazards, flat tires or mechanical breakdowns. By speeding the removal of stalled vehicles and other hazards, the call box network also helps in the region's fight against traffic congestion. About 3,500 call boxes are installed on more than 1,100 miles of urban, suburban and rural highways and expressways in the nine-county Bay Area. Call boxes are spaced between quarter-mile and two-mile intervals, with most at half-mile intervals.

The call box program is a joint project of Caltrans, the California Highway Patrol (CHP) and MTC Service Authority for Freeways and Expressways (SAFE), which was created by the state Legislature in 1987 to manage the system. MTC manages contracts for call answering services with a private call center and the CHP, and for call box repair with Comarco Wireless Technologies.

Project Objective

- To provide an effective means of communication 24 hours per day for highway motorists who need roadside assistance.

Highlights

In FY 01/02:

- Call answering performance significantly improved;
- Call volumes continued to decline; and
- A five-year Strategic and Financial Plan was adopted that will result in a more cost-effective call box network.

Project Revenues

The following table provides project revenue information for the Incident Management Program, which includes both Freeway Service Patrol (FSP) and call box program revenues, as stated in the System Management Funding section of this report. This information is broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which include SAFE, and state FSP and Traffic Mitigation Program funds. Prior to FY 03/04, the Incident Management Program received inconsistent amounts of STP/CMAQ funds. Beginning in FY 03/04, a consistent level of STP/CMAQ funds will be used to expand the Incident Management Program and implement other regional improvements to better manage the flow of traffic.

Incident Management Program (FSP/Call Box)

Funding Source	Fiscal Year (In thousands of 2001 dollars) 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
STP/CMAQ	$971	$303	$1,584	$1,584	$1,584	$6,025	9%	
Other	$11,518	$11,334	$11,456	$11,722	$11,878	$57,909	91%	
Total	**$12,489**	**$11,637**	**$13,040**	**$13,306**	**$13,462**	**$63,934**		**$12,787**

Target Customer

All motorists using the approximately 1,100 miles of highways in the Bay Area covered by the call box network.

Measuring Performance

There are four ways in which performance of the call box program is measured:

- Average call delay — the time it takes for a call box call to be answered, on average, for all calls in a given month;
- Call answering — the percentage of calls answered within 20 seconds, 90 seconds or two minutes;
- System call-in performance — the percentage of call boxes in the system failing to meet automated maintenance call-in requirements, which confirm system availability; and
- Timeliness of repairs — the percentage of repairs taking more than one day to complete.

Each project performance measure is assessed monthly. For each measure, four performance ranges are set in the contracts for both call answering and call box maintenance. Incentive payments are provided when contractors achieve specific goal levels. For example, in the maintenance contract, performance below required standards results in a payment penalty of up to 10 percent. At the same time, performance above the standard results in a 5 percent payment bonus.

Project Performance

Despite system improvements, including faster call answering times and a moderately expanded network of call boxes, total call volume has been declining steadily since 1996. An increasing number of motorists are using cellular phones to directly report an emergency or to call for assistance (see Figure 1). Call box usage in the Bay Area has fallen by over 50 percent in the past five years, from an average call rate of 5.3 calls per call box in 1997 to 2.3 calls per call box in 2001. The sharp decline in usage prompted MTC SAFE to proactively explore program changes.

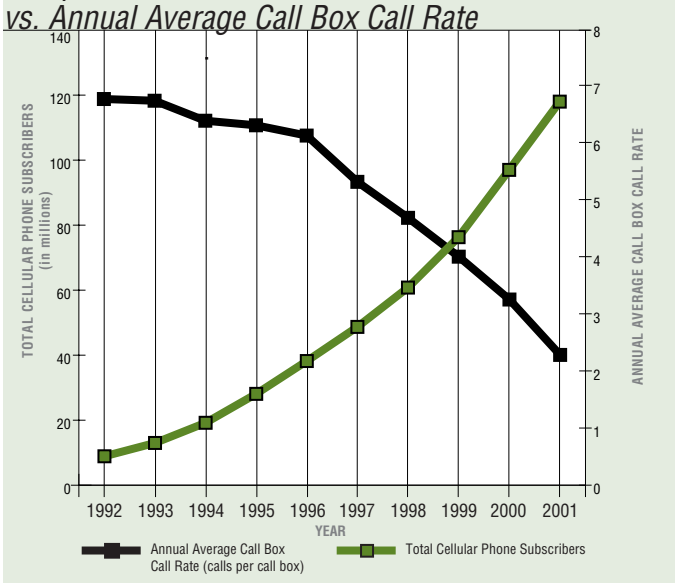
In June 2002, SAFE adopted a *Five-Year Strategic and Financial Plan* for the call box program that calls for the phased removal of up to one-third of the Bay Area's 3,500 call boxes over the next three to five years. Funds that would have been spent on maintenance of these call boxes will be reinvested in upgrading the remaining call boxes from analog to digital (which is necessary to prevent dropped calls), improving access for disabled and hearing-impaired motorists, and modernizing call boxes on Bay Area bridges. Recommendations from the Strategic and Financial Plan will be implemented in the coming years.

Operational incentives were introduced into the call box maintenance contract beginning November 1999. Call answering incentives were implemented in the call center contract beginning January 2002. Call box program performance continues to improve since the incentives for repair were implemented. Call answering financial rewards and penalties also have resulted in faster call answering.

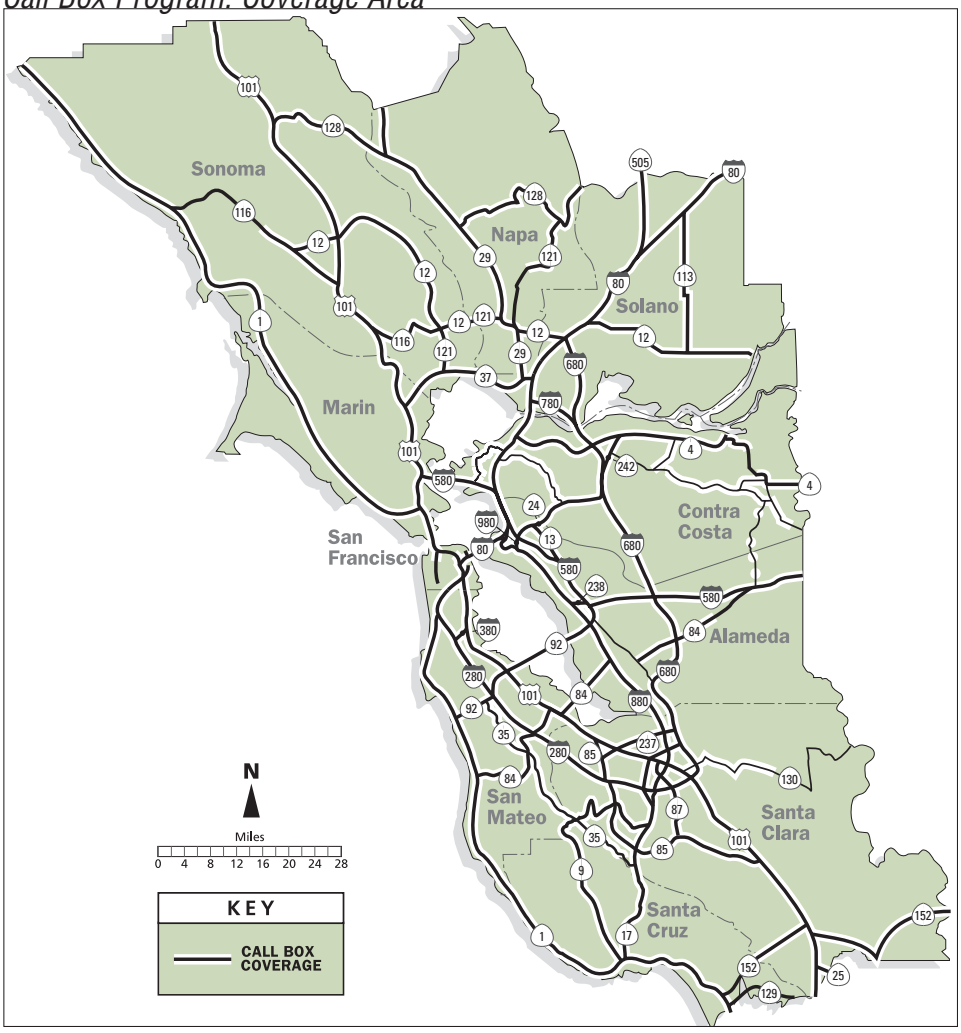
In FY 01/02, average delay in answering a call was 15 seconds, down from 28 seconds the previous year (see Figure 2, next page). This 15-second delay represents a 29 percent decrease in delay time over the previous year and meets the monthly performance goal. Overall, 98 percent of calls were

figure 1

Comparison of Annual Cellular Phone Subscribers vs. Annual Average Call Box Call Rate



Call Box Program: Coverage Area



answered within 90 seconds(see Figure 3). Project managers attribute these improvements to contractor-initiated operational changes and better staff training. The percentage of disconnected or dropped calls was 0.3 percent, down from 1.3 percent in FY 00/01. The decrease in lost calls is partially explained by the gains in average delay answering calls, i.e., more calls were answered before the caller decided to abandon the call.

System availability, as measured by the percentage of call boxes that regularly meet automated maintenance call-in requirements, also improved slightly over previous years in FY 01/02. Over the last three fiscal years, the percentage of call boxes that fail to call in as required has dropped from 4 percent to less than 2 percent

Future Expectations

The call box program will focus on maintaining high call center customer service performance and implementing the *Five-Year Strategic and Financial Plan*.

figure 2

Average Monthly Delay in Call Answering — Levels of Service Goals to Actual

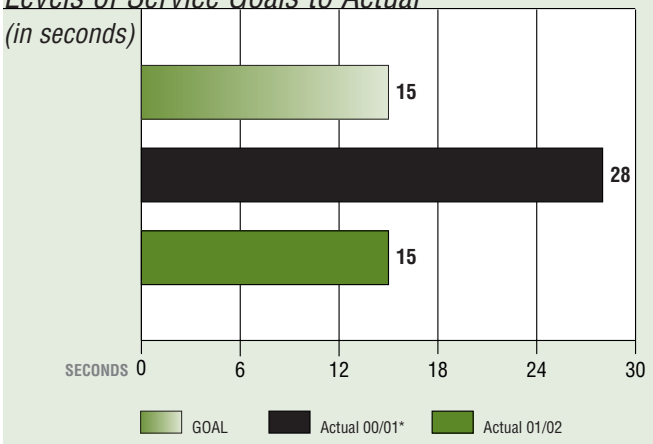
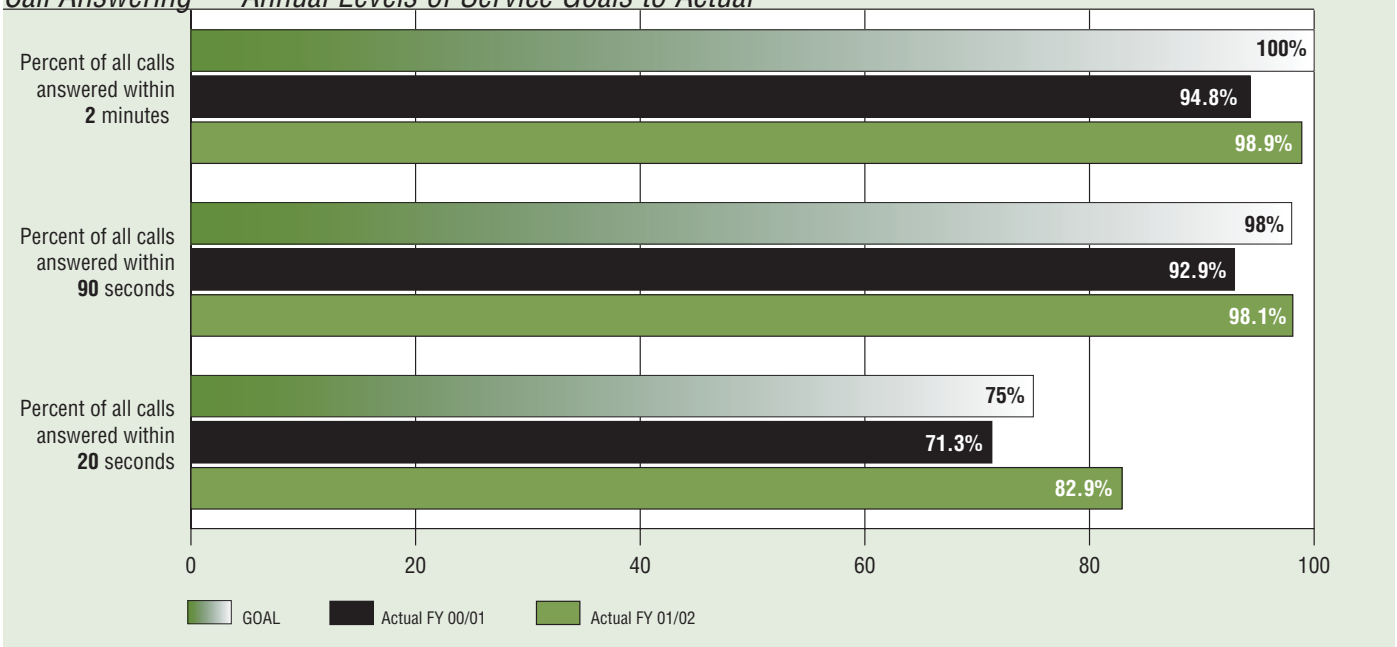


figure 3

Call Answering — Annual Levels of Service Goals to Actual



The Freeway Service Patrol

The Freeway Service Patrol (FSP) is a fleet of roving tow trucks, covering some 450 miles of the Bay Area's freeways, that help clear accidents, assist motorists, and remove dangerous debris from the roadway, primarily during peak commute periods. Tow truck drivers are frequently the first to arrive at accident scenes or find stranded motorists. They also respond to radio-dispatched requests for assistance. FSP drivers patrol "beats" — route segments that are selected based on several factors, including a high rate of traffic and congestion, frequent accidents or stalls, and lack of shoulder space for disabled vehicles. The range of free assistance includes changing a flat tire, jump-starting a dead battery, refilling a radiator or providing a gallon of fuel. If a vehicle will not start, it is towed off the freeway to the nearest CHP-identified location.

The FSP is a joint project of Caltrans, the CHP and MTC SAFE. MTC SAFE manages contracts for motorist assistance services with multiple Bay Area tow contractors.

Project Objectives

- To decrease congestion by quickly clearing accidents, stalls and roadway debris on designated freeway and expressway segments during morning and afternoon commute hours, generally from 6 a.m. to 10 a.m. and from 3 p.m. to 7 p.m., Monday through Friday.
- To improve public safety and to reduce fuel consumption and motor vehicle emissions by alleviating start-and-stop driving and vehicle idling due to traffic congestion.

Highlights

In FY 01/02, the FSP achieved the following:

- Handled over 100,000 incidents, almost 50,000 of which involved motorists in stalled vehicles. By quickly detecting and clearing these incidents, the FSP saved motorists roughly 3.5 million hours of delay and reduced by 500 tons the pollutants released into the air.
- Continued implementation of a strategic expansion plan that resulted in an 8 percent increase in assists; and
- Earned a service rating of "excellent" by 93 percent of its customers.

Project Revenues

See call box program (page 28) for a description of combined expected revenues.

Target Customer

All motorists driving during morning and afternoon commute hours on designated segments of the Bay Area freeway and expressway network.

Measuring Performance

The FSP program focuses on customer needs and rigorously monitors performance and service quality. Specifically, all of the measures used for the program involve different aspects of the customer experience. Measures range from how long the customer has to wait for service, to how many customers are assisted per beat and per truck per hour. Additional measures include:

- Overall customer rating of FSP service, including suggestions on service improvements; and
- Percentage of assists involving people.

Since calendar year 2001, cumulative savings in delay, fuel and vehicle emissions are calculated annually by beat, based on a methodology developed by researchers in the Partners for Advanced Transportation and Highways (PATH) program at the University of California at Berkeley.

Project Performance

Based on the newly-developed PATH methodology, the FSP program was shown to have reduced delays, fuel consumption and pollutants in the Bay Area in calendar year 2001 as follows:

- Annual savings in delay was 3.5 million hours;
- Annual savings in fuel was 1.4 million gallons; and
- Annual emissions reductions were: 43.25 tons of hydrocarbons, 443 tons of carbon monoxide and 11.16 tons of oxides of nitrogen.

"A knight in shining armor! What a fantastic service! Thank you!"

"On a scale of 1 to 10 where 10 is the highest rating, your [FSP] program receives a 12."

Systemwide results for FSP performance over the past three years include:

	Total Assists	Avg. Wait Time per Assist (minutes)	Assists/ Truck/Hour	Assists/ Beat/Hour
FY 99/00	109,889	9.51	0.98	2.03
FY 00/01	106,808	9.90	0.99	2.04
FY 01/02	114,982	9.83	0.90	2.02

Since FY 99/00, MTC SAFE has strategically expanded FSP service to include less congested beats. Even with this expansion, the average time that customers wait before an FSP vehicle arrives to assist them has remained steady at about 10 minutes.

There are two specific benchmarks used to measure FSP performance: 1) average wait time — the time a person waits for FSP help to arrive at their location (currently set at 10 minutes or less), and 2) customer service ratings — the percentage of customers who use the service and rate the service they received as excellent (currently set at 90 percent). These benchmarks were established by MTC project managers based on past performance.

Figure 1 illustrates that over the last three years the FSP program has maintained an average wait time of less than 10 minutes, thus exceeding the current benchmark. The very slight increase in average wait time since FY 99/00 is due to the increase in beats added to the system that are outside the core service area and have fewer FSP trucks patrolling them.

figure 1

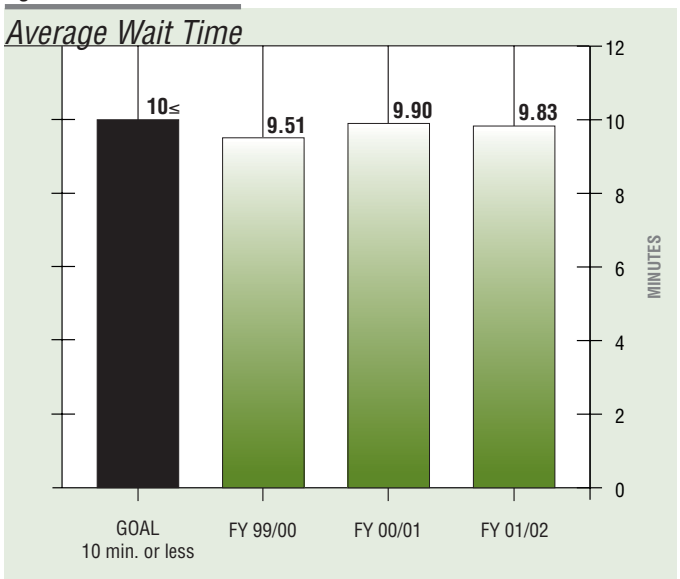
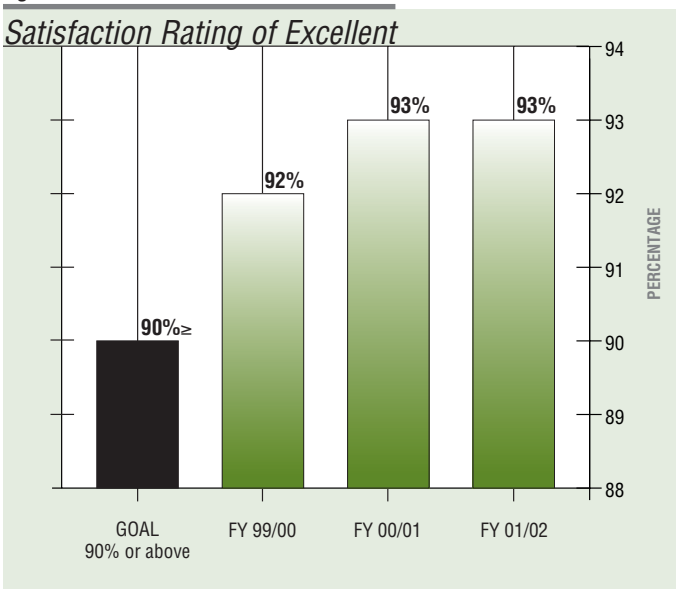


Figure 2 shows that the FSP program has consistently surpassed the benchmark of 90 percent "excellent" rating for the service from people assisted by the FSP. Direct interaction with motorists accounts for about 47 percent of all freeway incidents serviced by the FSP. Survey findings reveal that approximately 93 percent of FSP customers rate the service "excellent" and an additional 6 percent rate the service "good."

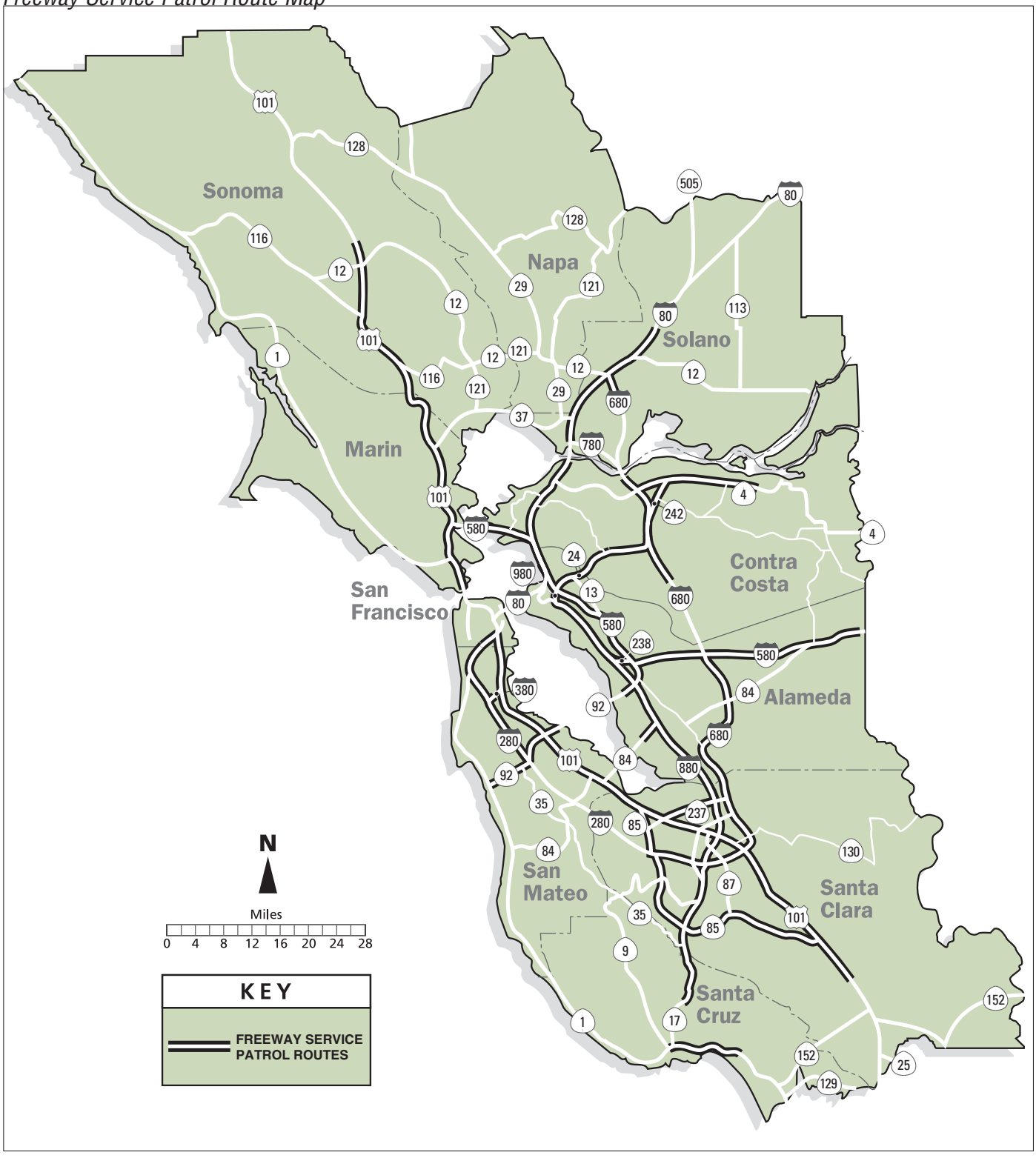
figure 2



Future Expectations

In FY 02/03, the FSP program is initiating a four-year service expansion plan. Expansion efforts will include adding new trucks and beats, increasing hours on existing shifts, increasing midday and weekend service on select beats, and increasing service in construction areas. Although expansion is based on a substantiated need, MTC SAFE does not expect the additional service in less congested areas to boost performance records, because the total number of assists is expected to grow in the more congested "core" beats. For this reason, MTC SAFE is considering using two categories for performance measures in the future — one for the "core" service and another for "peripheral" service.

Freeway Service Patrol Route Map



Regional Rideshare Program

The Regional Rideshare Program encourages people to use alternatives to driving alone (such as carpooling, vanpooling, riding transit, bicycling, telecommuting and walking) by providing information about travel options, facilitating "matches" between interested carpoolers and vanpoolers and conducting marketing and outreach efforts to employers and the public. If it is successful in promoting alternatives to driving alone, the program is expected to reduce traffic congestion and pollution in the Bay Area. Under contract to MTC and funded jointly by the congestion management agencies (CMAs), Bay Area Air Quality Management District and MTC, RIDES for Bay Area Commuters provides regional program services, with support from Solano/Napa Commuter Information.

Project Objective

- To shift individuals from single-occupant vehicles to carpools, vanpools and other transportation alternatives, and help individuals sustain this shift in order to mitigate the growth of traffic congestion and reduce motor vehicle emissions in the Bay Area.

Highlights

In FY 01/02, the program achieved the following results:

- Reduced congestion by eliminating 1.7 million vehicle trips (approximately 74.2 million vehicle miles traveled) from Bay Area roads; and
- Contributed to cleaner air by reducing vehicle emissions.

Project Revenues

The following table provides Regional Rideshare Program project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources. These include State Transportation Improvement Program (STIP), Transportation Development Act (TDA) and Transportation Fund for Clean Air (TFCA) funds. Prior to FY 03/04, the program's funding partners contributed TFCA, STIP or TDA funds per an informal six-year funding agreement. Beginning FY 03/04, federal CMAQ funds will be used instead to fund a majority of the program. This funding approach emphasizes the regional nature of the project and streamlines funding.

Regional Rideshare Program

Funding Source	Fiscal Year (In thousands of 2001 dollars) 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
STP/CMAQ	—	—	$2,173	$2,171	$2,347	$6,691	36%	
Other	$3,696	$3,677	$1,489	$1,458	$1,457	$11,777	64%	
Total	**$3,696**	**$3,677**	**$3,662**	**$3,629**	**$3,804**	**$18,468**		**$3,694**

"…I would like to thank to your organization for this wonderful service."

"I want to take a moment on the eve of my twentieth anniversary as a vanpool owner-operator to thank RIDES for all the help and assistance provided me over all of these years."

Target Customer

Individuals who drive alone and employers of these individuals and current carpoolers and vanpoolers.

Measuring Performance

The Regional Rideshare Program conducts surveys to directly determine the effects of program activities on client mode choice. Following a methodology developed by researchers at California State University, Chico, the program uses "Report Card" and survey data to mathematically derive 1) the number of clients placed in an alternative to driving alone, or "placements," 2) the number of vehicle trips reduced, 3) vehicle miles traveled (VMT) reduced and 4) emissions reductions. Additionally, MTC has established a series of detailed performance goals for the Regional Rideshare Program through the program contract. These goals are annually monitored and updated, and shared with the funding partners.

Project Performance

The Regional Rideshare Program eliminated almost 1.7 million vehicle trips (see Figure 1) and reduced VMT by 74.2 million (see Figure 2) in FY 01/02. In FY 99/00 and FY 00/01, the

figure 1

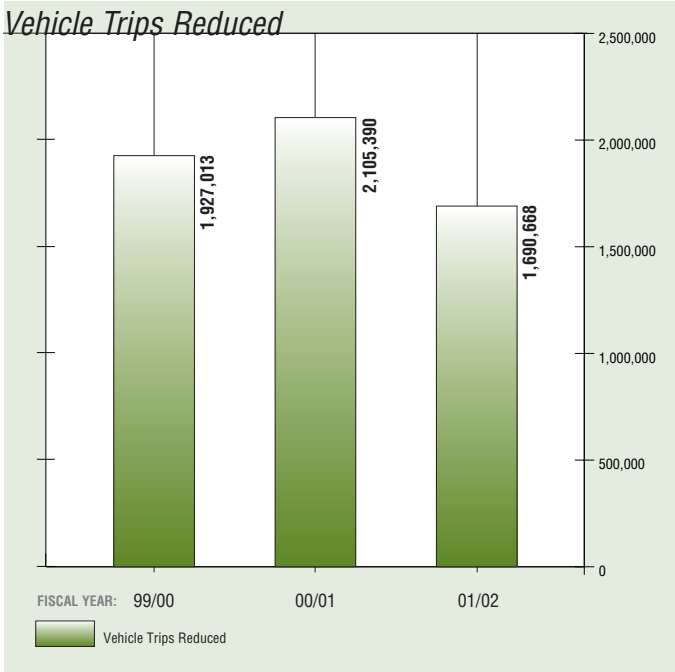
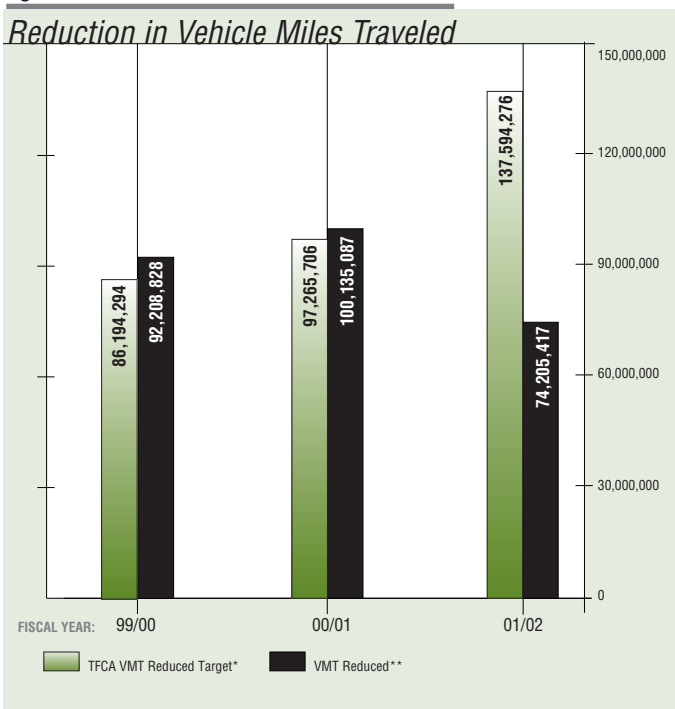


figure 2



* The Transportation Fund for Clean Air (TFCA) VMT Reduced Target is for an October-to-September fiscal year, an offset of three months from MTC's standard July-to-June fiscal year.

** Vehicle Miles Traveled (VMT) Reduced is calculated as a function of the number of people placed in a commute alternative, the length of time they remain in the commute alternative and the average distance for the commute alternative.

program surpassed the VMT reduction targets it had established for the TFCA grant it received from the Bay Area Air Quality Management District. However, the program did not meet its VMT reduction target for FY 01/02. In terms of air quality benefits, an estimated 3.0 million pounds of pollutants were reduced in FY 01/02, as depicted in Figure 2.

The rideshare program did not meet some performance goals that were newly established by MTC in FY 01/02 (see Figures 3 and 4). In many cases, these performance statistics are the building blocks for calculating the program's performance measurements of vehicle trips, miles traveled and emissions reductions. New matchlists generated for individuals interested in ridesharing (15,826 matchlists) were about 27 percent below goal. The program made 13,086 placement calls to individuals to offer them commute alternative assistance, which was about 13 percent below goal. The average size of the database of individuals interested in ridesharing was 11,290 records, compared to the goal of 16,000. However, the Regional Rideshare Program did exceed the performance goal for establishing vanpools (98 vanpools formed, goal was 96; see Figure 4). MTC project staff believes that shortcomings in meeting performance goals are in part due to the economic downturn and related easing of traffic congestion.

As the information broker for alternative transportation in the Bay Area, the rideshare program prepares educational, promotional and research materials to help fulfill its mission. For example, in FY 01/02, the program prepared diverse collateral for targeted marketing campaigns and special events, conducted research for the tenth annual edition of the Commute Profile, and published the document in October 2002.

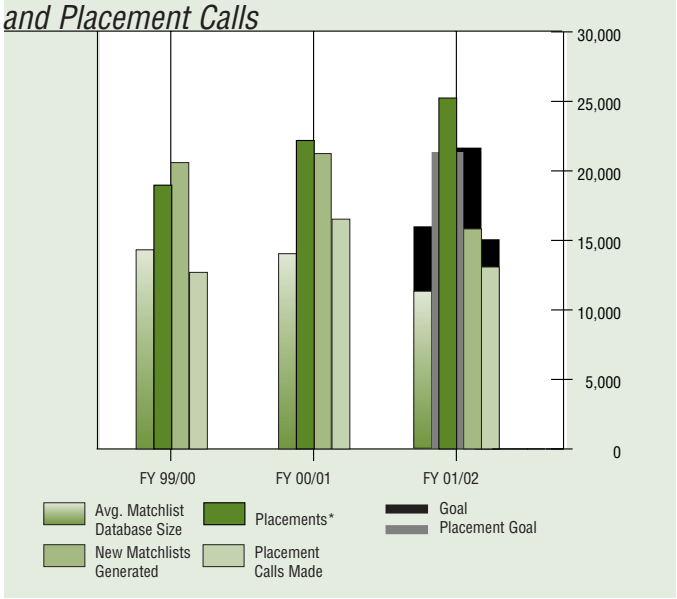
Future Expectations

MTC and the Regional Rideshare Program funding partners (the Air District and the CMAs) are jointly responsible for the strategic direction of the Regional Rideshare Program. In recent years, these partners have voiced concerns over program performance and contract management issues. In response to these concerns, MTC initiated a performance audit of the program, which will be completed by the end of 2002. Key draft performance audit recommendations include:

- Creation of a technical advisory committee to formalize the joint responsibility for strategic direction;

figure 3

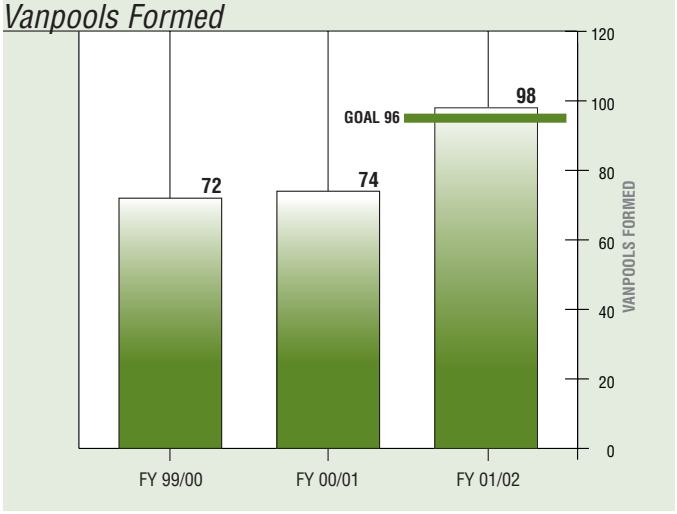
Database Size, Placements, New Matchlists and Placement Calls



* The "placements" figure is calculated through a formula that factors in not only new and updated matchlists generated and placement calls made, but also new van riders, information requests fulfilled, and promotion and "bike buddy" program results. It also takes into account such associated elements as trip distance, percent of clients changing travel mode as a result of rideshare services, frequency of new mode use, etc. These statistics are regularly updated through quarterly client surveys and periodic evaluation studies.

figure 4

Vanpools Formed



- Clarification of the Regional Rideshare Program's roles and responsibilities relative to local rideshare organizations and MTC;
- Streamlining of program goals;
- Modification of monitoring methodology and report formats; and
- Reorganization of the rideshare program work plan and restructuring of the contract.

The audit findings and recommendations are being discussed with the rideshare program funding partners to determine how to modify and improve program implementation. After discussions with the rideshare program funding partners, MTC will proceed to implement the audit recommendations.

In December 2001, MTC conducted focus groups with Bay Area carpoolers and found that participants wanted accessible and sophisticated matching capabilities provided over the Internet. Up to now, ridematching was only available by phone. In September 2002, the new Internet ridematching tool went "live" in the Bay Area. The new ridematching tool allows individuals to 1) conduct rideshare registration completely online; 2) maintain their personal commute profiles in the ridematching database; and 3) identify and contact potential rideshare partners with similar commute profiles via the Internet. The ridematching tool will be launched through the traveler information Web portal at www.511.org and will be marketed as a key element of the 511 traveler information service.

In the near-term, the strategic focus of the Regional Rideshare Program will be the new ridematching tool, in order to take full advantage of its functionality. MTC will work with RIDES to build better mechanisms to gather consumer feedback on the Internet tool, as well as other program products and services. MTC anticipates that additional features will be added to the system and that it will be further customized in response to feedback from funding partners and consumers.

Ridesharing information is a key element of the 511 traveler information service, which will be launched in December and promoted regionally. The rideshare program is expected to capitalize on, and benefit from, the centralization of information resources.

Regional Transit Information System/ www.transitinfo.org

The Regional Transit Information System (RTIS) gathers, organizes and disseminates schedule, route and fare information for all public transit services in the region. The most visible product of the RTIS is the transit information Web site <www.transitinfo.org>. In addition to providing a single point of access to route, schedule and fare information, this Web site also includes a popular trip planner, which travelers can use to generate transit itineraries for intra- and inter-agency trips. Transit agency call centers connect to the same transit trip-planning software to provide information to their customers by telephone.

The RTIS includes three key system components: 1) the Regional Transit Database (RTD), in which MTC maintains and updates transit service data; 2) a set of software programs or applications that allow the data in the RTD to be displayed as schedule or route information on the Internet, or to generate interagency transit itineraries with the trip planner; and 3) a communication system that uses either the Internet or a dedicated frame-relay network to connect the public and transit agencies to the software programs.

The RTIS is an MTC-sponsored project that relies on the support and cooperation of Bay Area transit operators. MTC manages a contract with GIS/Trans, Ltd., for design, development, implementation and maintenance of the RTIS, including the database, the software and the communications network.

"I have just moved to San Francisco from the East Bay, have NEVER used public transportation (except for BART occasionally) and I absolutely LOVE this transit trip planner!!!"

Project Objective

- To provide the public with accurate, reliable and comprehensive transit information.

Highlights

FY 01/02 performance highlights include the following:

- About 19 million user sessions were recorded on <www.transitinfo.org>;
- Usage of the trip planner surged in its first year of operation, generating transit itineraries in response to more than 1 million requests; and
- The trip planner was honored by the California Transportation Foundation with its 2001 Tranny Award for best transit project in California.

Project Revenues

The following table provides Regional Transit Information System project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which, in the case of RTIS, are entirely comprised of State Transit Assistance funds.

Regional Transit Information System

Funding Source	Fiscal Year (In thousands of 2001 dollars) 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
STP/CMAQ	$299	$290	$621	$748	$663	$2,620	34%	
Other	$1,633	$1,388	$621	$748	$ $663	$5,052	66%	
Total	**$1,932**	**$1,678**	**$1,242**	**$1,496**	**$1,326**	**$7,672**		**$1,534**

Target Customer

Current and potential transit users as well as transit agencies.

Measuring Performance

Performance of the RTIS is measured by tracking the following statistics for the Web site and the trip planner:

- Number of user sessions. (A user session is a "visit" made by an individual computer. Requests from that same computer within a 10-minute period are counted as a single visit.);
- Requests for transit agency information on transitinfo.org, sorted by the subcategories of schedules, route maps, and system maps; and
- Trip-planner itineraries generated.

In addition, RTIS customers regularly provide feedback on transitinfo.org and the trip planner via an automatic e-mail link at the site. Customer feedback is an important tool that MTC uses to 1) improve the accuracy of transit data and 2) refine the search logic and algorithms that the trip planner uses to generate trip itineraries.

Project Performance

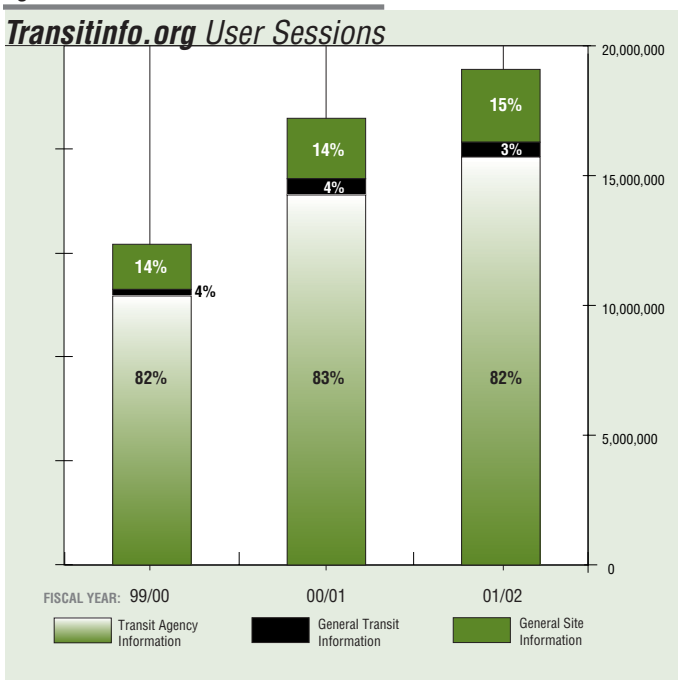
The new transit trip planner debuted for public use in July 2001, with schedule data available only on a portion of Bay Area transit agencies. Use of the trip planner has continued to grow, even though inclusion of all transit agencies in the database and formal marketing have yet to be completed. In FY 01/02, transit patrons generated more than 1 million itineraries using the trip planner. Customers generated 138,857 itineraries in June 2002, compared to 38,128 itineraries in July 2001 — a 264 percent increase in one year (see Figure 1). MTC plans to market the trip planner after all the transit agencies are included in the Regional Transit Database by mid-2003.

Transit agency partners also benefit significantly from the services the trip planner provides by equipping transit agency information staff with a tool to assist people who call them directly for route planning information. However, transitinfo.org data presented for the three fiscal years does not include transit operator usage of the trip planner.

In FY 01/02, the transitinfo.org Web site logged more than 19 million user sessions, up nearly 11 percent from the previous year(see Figure 2). In general, transitinfo.org customers requested information in one of the following three areas:

- Transit Agency Information, which includes information on specific transit agencies' schedules, route maps, system maps, trip-planner itineraries (FY 01/02 only), and other information (fares, bicycle policies, etc.);

figure 2



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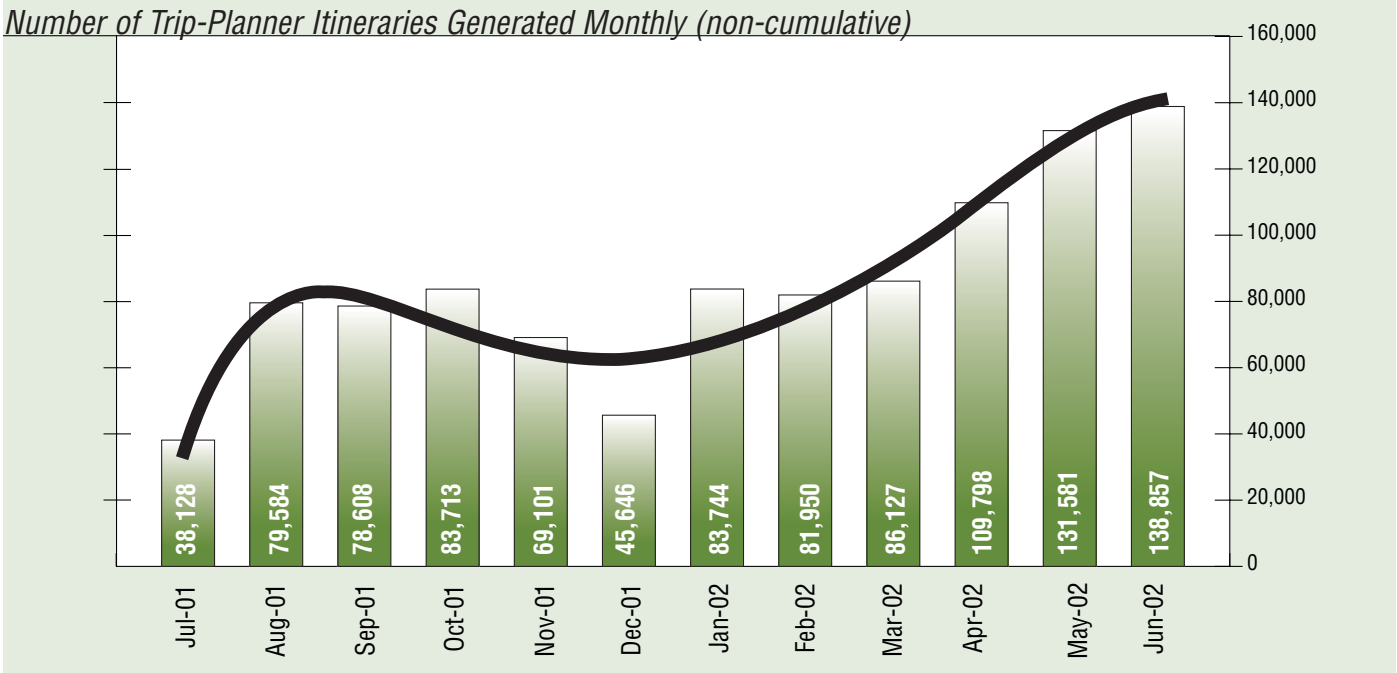
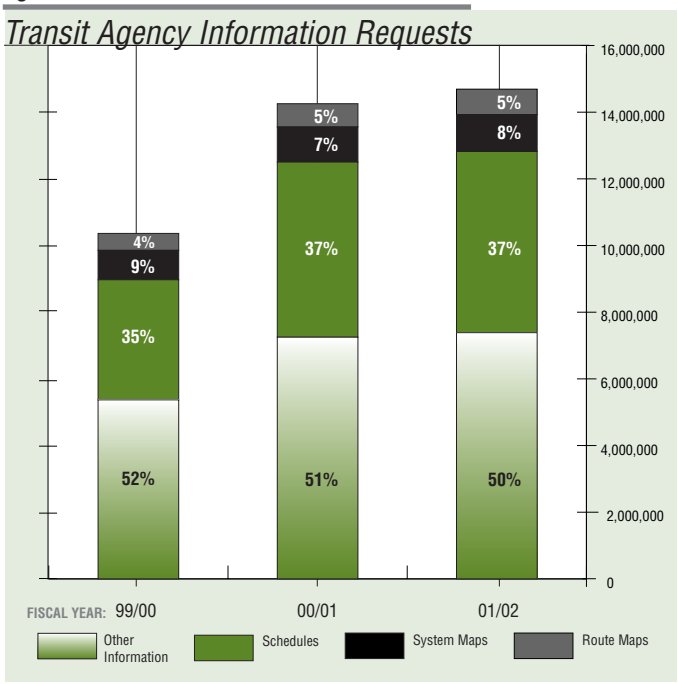


figure 3



- General Transit Information, which includes general information about transit, including airport service, bicycle information, the destinations guide, and "Transit Outdoors;" and
- General Site Information, which includes information on the main index page, alternate agency index pages (e.g., the graphical map and by county), search engine, site history pages, comment forms, and statistics pages.

Transit Agency Information was consistently the most requested category of information (15.7 million) at 82 percent of all information requests in FY 01/02. Figure 3 shows usage patterns within the Transit Agency Information feature. It is interesting to note that, even as overall usage of the Web site continues to grow, the general usage patterns have remained constant.

Future Expectations

Tremendous opportunities for further gains in trip-planner usage and better customer service remain. Accordingly, operational performance goals for FY 02/03 will focus on the continued growth in usage of the Web site:

- MTC will monitor the user sessions on the Web site and specifically the trip planner to ensure that — at a minimum — the current usage for existing operators is sustained. As new operators are added to the trip planner, we will monitor the usage growth pattern against previous performance from similar transit agencies.

"This is the most user-friendly site I have had to deal with in regards to public transportation. Thank you!"

"I love this system! I use it all the time…"

- MTC will monitor user feedback to ensure that the information remains accurate and to inform future enhancements to the trip planner.
- Marketing for the transit Web site will commence as part of the overall 511 marketing campaign in spring 2003.

As well as establishing operational goals, MTC is establishing key project benchmarks for FY 02/03:

- At this time the trip planner includes two-thirds of the Bay Area transit agencies. MTC will continue to expand the number of transit operators included in the trip planner. Santa Clara County's VTA, SamTrans and Golden Gate Transit and the remaining Bay Area operators — those in Napa, Solano and Sonoma counties — will be included in the trip planner by June 2003.
- A number of improvements will be made to the Web site and the trip planner. The Web interface will be completely overhauled to make the system easier to use. The logic governing how itineraries are developed will be revised to improve the accuracy of itineraries. Transit agency route, schedule and fare data also will continue to be updated and verified. The Web site will be integrated into the 511.org Web site in March 2003.
- Market research to further refine features for the trip planner and transit information Web site will take place after the new Web site is launched (June 2003).

PROJECT PERFORMANCE REPORT

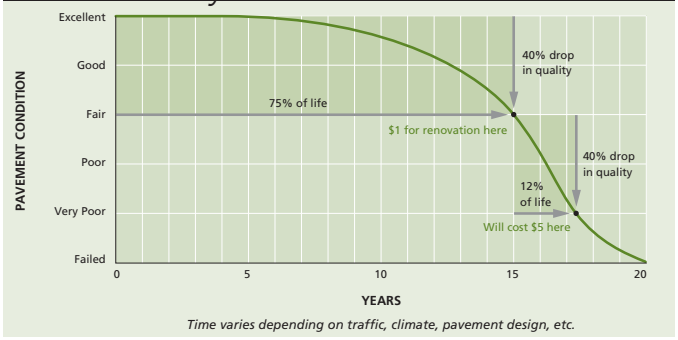
SUPPORT SERVICES TO PARTNER AGENCIES

Pavement Management Technical Assistance Program (P-TAP)

Established in 1999, the Pavement Management Technical Assistance Program (P-TAP) provides the services of pre-qualified consultants to help local jurisdictions better manage and maintain their streets and roads, using a pavement management system (PMS). A PMS is a computer-aided decision-making process used by public works personnel to maximize the benefits of investments in road rehabilitation. The system is used to track pavement conditions, establish optimum repair programs, identify the impacts of inadequate budgets on pavement condition, and guide cost-effective expenditure of existing funds. In the Bay Area, 103 cities and counties use MTC's pavement management system to manage their pavement inventories.

figure 1

Pavement Life Cycle



Time varies depending on traffic, climate, pavement design, etc.

A critical concept in street and road maintenance is that, while pavements deteriorate only 40 percent in quality in the first 75 percent of their life, this deterioration subsequently accelerates rapidly, resulting in another 40 percent drop in quality in the next 12 percent of life (see Figure 1). A pavement management system can identify pavements that are headed toward such a precipitous decline, so that preventive maintenance can be applied in a timely fashion.

MTC obtains current, reliable pavement condition information through the P-TAP program. More reliable pavement maintenance data results in better estimates of regional pavement maintenance needs, helps develop effective pavement repair programs, and helps in making local streets and roads maintenance funding stretch further.

Project Objectives

To help Bay Area cities and counties implement and maintain a PMS to assess pavement condition, determine pavement needs, identify the impact of inadequate budgets on pavement condition, establish optimum repair programs, allocate existing funds cost-effectively, and provide a basis for local funding decisions for pavement maintenance. Specific project goals include:

- Increasing the number of Metropolitan Transportation System (MTS) and centerline miles[1] managed by a PMS, and in particular, using MTC's PMS;
- Focusing technical assistance priority for jurisdictions with 100 or fewer centerline miles (since these areas are less likely to have the financial and staff resources to independently maintain a PMS);
- Assisting jurisdictions to design pavement rehabilitation projects, develop grant proposals, and increase the use of geographical information systems (GIS) to track pavement conditions; and
- Increasing the number of active users[2] of MTC's PMS.

Highlights

- By December 2002, P-TAP will have funded 131 projects in 91 different Bay Area jurisdictions. Forty jurisdictions have received more than one award of of those funds.

Project Revenues

The following table provides P-TAP project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which include the minimum local match required of project sponsors.

Pavement Management Technical Assistance Program

Funding Source	Fiscal Year (In thousands of 2001 dollars) 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
STP/CMAQ	$485	$471	$641	$622	$604	$2,823	89%	
Other	$63	$61	$83	$81	$78	$366	11%	
Total	**$548**	**$532**	**$724**	**$703**	**$682**	**$3,189**		**$638**

[1] The MTS is a multimodal system of transportation facilities that are crucial to the regional freight and passenger mobility needs of the nine-county Bay Area. A centerline mile is a mile of road, regardless of how many lanes there are in each direction. An MTS mile is one mile of road on the MTS system

[2] Active users are defined as jurisdictions that purchased the software and 1) review and update streets and roads inventory information at specified intervals and 2) calculate budget needs and scenarios for rehabilitating or replacing deficient pavement sections for a four-year period.

Target Customer

Any Bay Area city or county that has jurisdiction over roads and is unable to implement and/or maintain a PMS on its own.

Measuring Performance

The success of P-TAP is currently tracked by the following measures, with an emphasis on making sure that the needs of jurisdictions with limited financial and staff resources are met:

- Number of jurisdictions assisted;
- Increase in number of MTS and centerline miles managed through MTC's PMS; and
- Increase in active users of MTC's PMS.

For future reports, MTC staff is evaluating the feasibility of tracking the following measures as well:

- Increased awareness of pavement maintenance needs by the jurisdictions as demonstrated through budget increases for pavement maintenance or development of an effective pavement repair program based on PMS outputs;
- Improved pavement condition ratings, based on MTC's PMS software, at the local and regional level;
- Increased number of jurisdictions being PMS-certified. State statutes require the PMS certification before jurisdictions may receive state funding for streets and roads.
- Jurisdictions' rating of assistance received.

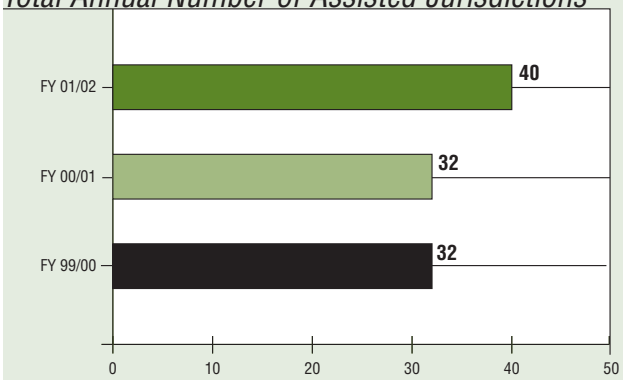
The above criteria may better gauge the success and effectiveness of the program but will require jurisdictions to provide additional data to MTC regarding pavement rehabilitation and maintenance budgets.

Project Performance

Overall, 40 jurisdictions received P-TAP assistance in FY 2002, up 25 percent (from 32) in FY 2001. It is important to note, however, that year-to-year increases or decreases in the number of jurisdictions assisted are the result of several different factors. Most significant is the cyclical nature of the certification process, which mandates pavement inspections every two years. In addition, the number of applications for P-TAP grants may be affected by fluctuations from year to year in jurisdictions' budgets or the need for help with particular, one-time-only pavement projects.

figure 2

Total Annual Number of Assisted Jurisdictions



Because smaller to medium-sized jurisdictions generally have fewer resources, they receive preference over larger jurisdictions in the competition for P-TAP assistance. Once their needs are met and funds are still available, the focus shifts to helping larger jurisdictions. The largest percentage change over the past year was the sizable increase in the number of jurisdictions with 50 to 100 miles of pavement, up from three in 2001 to 12 in 2002. These jurisdictions accounted for 30 percent of all those receiving P-TAP assistance in FY 2002, nearly matching the commitment to even smaller jurisdictions — those with less than 50 miles of pavement — which accounted for 32 percent of all P-TAP assistance.

The number of centerline miles of pavement managed through the P-TAP program is up only .5 percent from the 2001 level. However, the number of MTS miles has increased 6.4 percent since 2000. Of the 85 centerline miles added in 2002, 54 miles or 64 percent were on the MTS.

Future Expectations

The P-TAP program will continue to provide small and large jurisdictions with pavement management services, giving priority to the smaller jurisdictions. P-TAP has significantly improved the accuracy of city and county pavement data, which, in turn, increases the reliability and credibility of revenue, needs, and shortfall estimates. This information must continue to be gathered, at least every two years, for heavily traveled streets and roads, particularly for those roads that are deteriorating more rapidly. Technical assistance being provided by the P-TAP is also expanding to meet the desires of cities and counties to gain additional help in related local streets and roads maintenance areas such as grant assistance, GIS, and engineering design.

Traffic Engineering Technical Assistance Program (TETAP)

TETAP was created to help implement two of the Transportation Control Measures (TCMs) included in the 1990 update to the Bay Area Air Quality Plan, and to enhance the Bay Area's ability to take advantage of the flexible federal funds provided by the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). Expanding signal timing to new cities (TCM 24) and maintaining signal timing systems (TCM 25) were identified as the most cost-effective means of reducing emissions when the TCMs were developed in 1990.

Through TETAP, MTC provides local jurisdictions with traffic engineering assistance and expertise on projects to improve the operation of arterial roadways. Since the program's inception in 1993, nearly 160 projects have been funded, providing assistance in: traffic signal coordination; preparation of grant applications for traffic signal system improvements; analysis of bicycle and pedestrian facilities; and other traffic engineering projects that improve arterial operations.

Traffic engineering assistance through TETAP is provided by consultants retained by MTC. Funding is approximately $200,000 per year, with grants typically ranging from $10,000 to $20,000 per project. Project solicitations usually occur in the last quarter of the year. Consultant selection occurs once every two years.

Project Objectives

Provide the assistance of a traffic engineering consultant to Bay Area jurisdictions to:

- Retime existing signal systems. The Bay Area has over 7,000 traffic signals, and half of those now operate in coordinated systems. Traffic signals should be retimed every three to five years to maintain efficient operation, but TETAP currently retimes an average of 68 signals per year. Starting in FY 03/04, MTC will retime 1,000 signals each year, based on 2001 RTP commitments.
- Analyze existing arterial operations problems, conceptualize solutions, and provide technical information to include in grant applications to implement solutions; and
- Implement federal TCMs 24 and 25 to improve air quality in a timely fashion.

Highlights

- In 2001, 17 grant applications were approved. Ten were operational projects, and seven of those entailed retiming a total of 78 signals. The other seven projects included four that addressed bicycle/pedestrian issues and three were planning projects.

Project Revenues

The following table provides TETAP project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which include the minimum local match required of project sponsors. Beginning FY 03/04, the increase in regional funding will be used to retime approximately 1,000 signals per year.

Traffic Engineering Technical Assistance Program

Funding Source	Fiscal Year (In thousands of 2001 dollars) 01/02	02/03	03/04	04/05	05/06	5-Year Total	Percent of Total	Average Annual Revenue
STP/CMAQ	$215	$208	$1,300	$1,262	$1,225	$4,209	89%	
Other	$28	$27	$168	$163	$159	$545	11%	
Total	**$243**	**$235**	**$1,468**	**$1,425**	**$1,384**	**$4,754**		**$951**

Target Customer

Any agency that needs traffic engineering assistance to retime traffic signals, or analyze an existing traffic-related problem and evaluate potential solutions. Services are typically provided to cities and counties.

Measuring Performance

An Arterial Operations Committee comprised of local traffic engineers meets every other month to discuss the progress of regional projects that affect arterial operations; projects directed by the Committee; and other relevant issues, such as air quality conformity, status of funding obligations, upcoming grant and training opportunities, and new publications.

Annual reports to the Arterial Operations Committee by MTC staff summarize the number of jurisdictions that submit applications, the number that receive grants, and the type of projects funded (operations, safety or planning projects; single agency or multiagency projects). MTC also tracks the number of signals retimed.

In the future, monitoring of the TETAP program will include measuring performance objectives that encompass local agency satisfaction components such as perceived effectiveness of results, rating of technical assistance, and other elements.

Project Performance

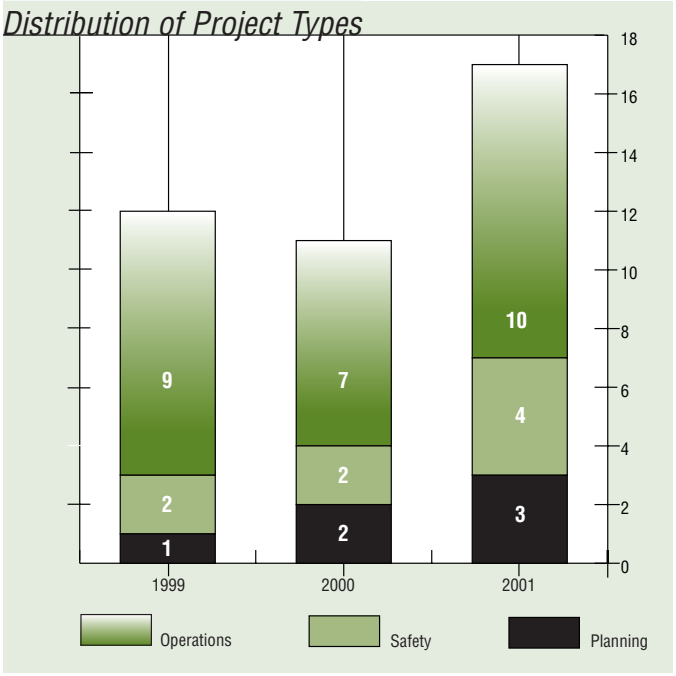
Within the overall goal of providing traffic engineering technical assistance to local agencies, different priorities are emphasized from year to year. In the 2000 funding cycle, for example, the goal of five of the 17 TETAP projects was to develop data that could support grant applications for further funding. Four of those projects were ultimately successful in leveraging additional funding.

In 2001, TETAP concentrated its efforts on operational projects, resulting in an increase in the number of traffic signals retimed from 56 in 2000 to 78 in 2001.

The 2001 TETAP cycle also funded four projects that focused on pedestrian safety and two projects that were follow-up studies of issues that arose from MTC's analysis of the feasibility of building a fourth bore in the Caldecott Tunnel. These issues concerned the traffic impacts on streets in the Rockridge area of Oakland and on future arterial volumes in Orinda.

figure 1

Distribution of Project Types



Future Expectations

Through TETAP, MTC will continue to provide local jurisdictions with traffic engineering assistance and expertise to improve the operation of arterial roadways. The increase in program funding is expected to allow the Bay Area to increase the number signals retimed each year from under 100 to 1,000 signals per year. TETAP will continue to provide limited assistance to local agencies in analyzing other safety and operational issues, and developing grant applications for operational improvements.

APPENDIX A

Appendix A

Advisory and Oversight Committees

Project	Advisory/Oversight Committee	Committee Members
Call Box Program	CalSAFE	Statewide Service Authority for Freeways and Expressways managers (managers of other California call box programs), California Department of Transportation (Caltrans) Headquarters, California Highway Patrol (CHP) Headquarters
Freeway Service Patrol	Technical Advisory Committee	Caltrans District 4 and CHP Golden Gate Division
Regional Rideshare Program	Rideshare Program funding partners, Transportation Demand Management Association network	Partners include Bay Area Air Quality Management District, county congestion management agencies (CMAs), transportation management associations, MTC, and other transportation organizations
Regional Transit Information System	Technical Advisory Committee of transit operators, Web Technical Advisory Committee	Transit operator staff representatives and customer service staff, Webmasters of transit operators
TravInfo®	Freeway Management Program Executive Committee, Technical Advisory Committee	Caltrans District 4 and Headquarters, CHP Golden Gate Division, FHWA, and representatives from smart corridors
TransLink®	Oversight Committee, Technical Working Groups and TransLink® Transition Group	Transit operator general managers and staff representatives
Pavement Management Technical Assistance Program	Pavement Management System Users Group	Public works staff from cities and counties
Traffic Engineering Technical Assistance Program	Arterial Operations Committee	Traffic engineering staff from cities and counties, Caltrans representatives, congestion management agency representatives

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Printing
Turner Group Publications, Inc.

Special thanks to the MTC Public Information staff and system management project managers for their contributions.

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